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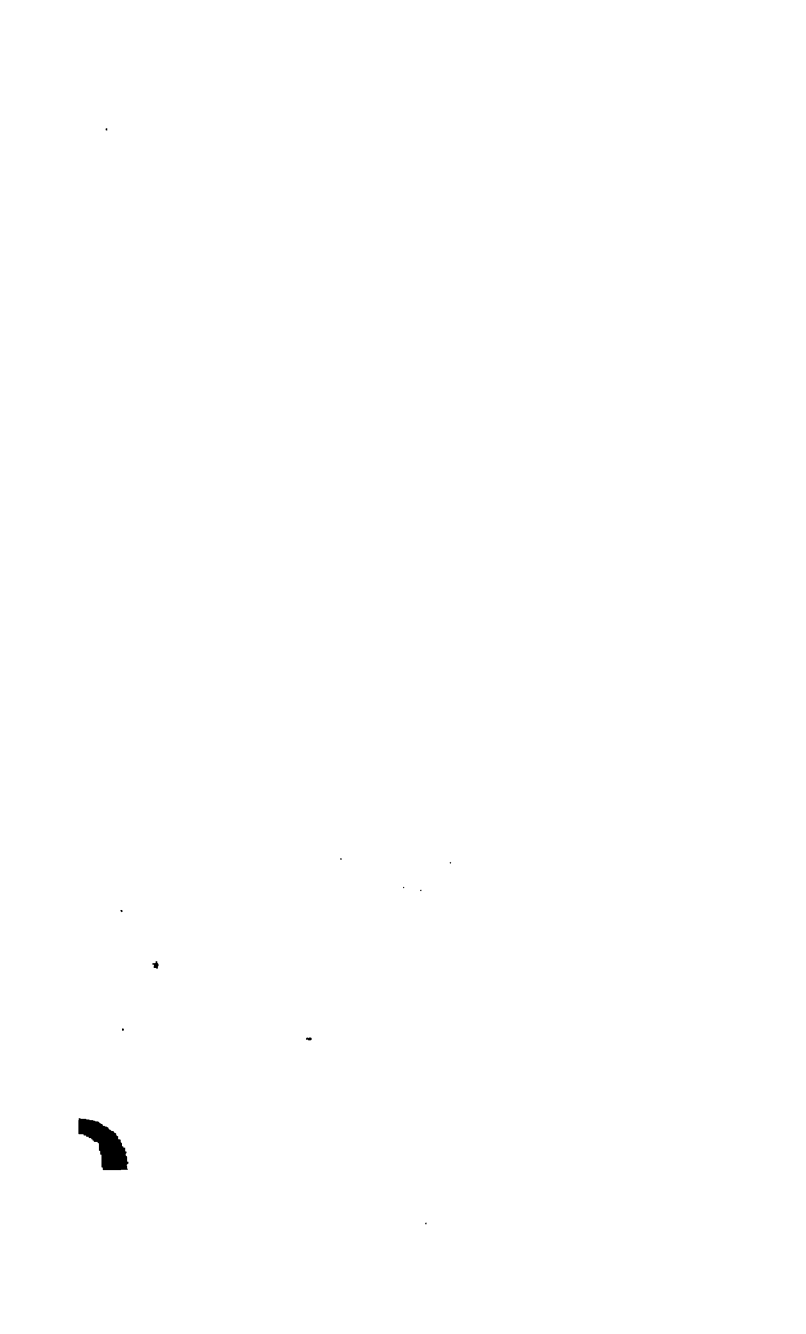
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THE
BOOK OF THE NURSERY





THE
B O O K
OF THE
N U R S E R Y.

THE
BOOK OF THE NURSERY.
THE MANAGEMENT
OF
INFANCY AND CHILDHOOD,
AND
THE PREVENTION AND TREATMENT OF THE
DISORDERS OF EARLY LIFE.

By WALTER C DENDY,
Past President of the Medical Society of London ; Surgeon to the
Royal Infirmary for Children, &c. &c.

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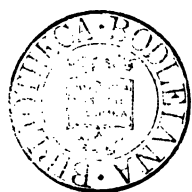
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TO
HER MAJESTY THE QUEEN,
THE MUNIFICENT PATRONESS
OF THOSE INSTITUTIONS WHICH ARE DEVOTED
TO THE PROTECTION OF THE TENDER
AGE OF INFANCY,

THIS WORK
IS DEDICATED,
WITH HER MAJESTY'S GRACIOUS PERMISSION,
BY
HER MAJESTY'S
MOST FAITHFUL SERVANT,

THE AUTHOR.



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PRECEPTS

FOR

THE MANAGEMENT OF INFANTS, &c.

*'O, fairest flower, no sooner blown but blasted !
Soft silken primrose, fading timelessly.
Summer's chief honour, if thou hadst outlasted
Bleak winter's force.'*—MILTON.

THE contemplation of the period of infancy—the earliest spring-time of human life—is replete with tender interest: it is blended in the writings of poets and moralists of all ages, forming some of their most beautiful illustrations of fancy and of feeling.

With mingled sensations of pity and of hope, we gaze on the youngling of the flock, or even the tender nestling chirping in its downy cradle; but the influence of infantile beauty combines the deepest sympathy for the helplessness of the babe with feelings of devout and ardent hope for the future. Such is the fascination of infancy, that the inspired writers have regarded a little child as one

of the purest, holiest, and most beautiful objects of the creation; and the bard of Erin has thus sung the expression of repentance (on the contemplation of a child at prayer) from the lips of one stained with blood and crime:—

‘ There was a time, thou blessed child !
When young and haply pure as thou,
I look’d and pray’d like thee.’

But these are the sensations of comparative indifference, when contrasted with the delicious feelings of the mother. The Roman philosopher has asked, ‘ What is there in nature so dear to a man as his own children ?’ but the combination of admiration, of instinctive attachment and of hope, in the bosom of the mother, surpasses every other feeling, proving the exquisite rewards of her pains and her perils. But these sensations are not unalloyed—Hope and Fear are twin sisters, harmonizing like the light and shadow of a landscape. Knowledge of the very fragile thread on which the life of an infant depends, tends to throw a triple interest, to insure a more vigilant guardianship around such precarious vitality.

‘ Lo, at the couch where infant beauty sleeps,
Her silent watch the mournful mother keeps ;
She, while the lovely babe unconscious lies,
Smiles on her slumb’ring child with pensive eyes,
And weaves a song of melancholy joy.’

In the scheme of human nature, the Creator

has wisely ordained a balance of happiness. On almost every enjoyment is entailed a degree of contrasted sorrow ; the more intense the pleasure, the more severe will often be the pain. Such are the extremes of the pure maternal love, assuming the characters of rapture or of anguish, as her prospects are lighted by hope or shaded by despair ; and this especially in the infancy of her offspring, when its utter helplessness claims almost every moment of a mother's life.

The system of the child is capable of constant modification : hence it is most frequently in our power to mould and educate the body—to impart to it that degree of physical perfection at which the standard of health and the requisites of beauty will be found.

‘ Children, like tender osiers, take the bow,
And as they first are fashion'd so they grow.’

The contrasted picture arising from neglect is melancholy. Disease of body produces often disease of mind. *Health*, the great spring and foundation of morality, is sapped ; and idleness, the prolific parent of evil, brings with it a train of misfortunes. Thus is the divine precept, which teaches us to train up a child in the way he should go, most effectually thwarted ; for, though the seeds of morality may be thickly scattered, they perish because they are sown on a soil choked by the weeds of disease.

Reflection on the great comparative mortality of childhood cannot but make us most anxious to assist the devoted mother in the nurture of her infant. It is, therefore, my ardent hope to direct the attention to those essential precepts, in the observance of which consists the preservation of that germ of health with which the infant may be born, the amendment of hereditary tendency to disease, and the prevention or mitigation of casual disorder, and to explain those peculiar external signs which are premonitory or evidences of internal disorder. In the course of this Essay I have, in a few instances, adopted the judicious opinions of other authors, and have repeated some which I had myself before expressed.

In attending to these dictates, even a moment should not be lost. The judicious management of the infant should commence from the hour of its birth, which introduces it to a new existence, and instantly exposes it to the influence of those external causes which so often become the excitement of disease. It is the province of the physician to restore health; it is the duty of the parent to *preserve* it. To qualify her for this office, it is my wish to present a book of *precepts*, rather than one of argument;—a *concise* volume of *reference*, rather than an elaborate treatise for study, which might aim more at display than the true and cautious instruction of a mother's mind. I

have added those forms of remedies which, I believe, may be entrusted to the mother's care. Domestic remedies, however, should never be administered by the nurse for *acute* or *established* disorder; but in the commencement or *early* stage, judicious domestic management will often avert the danger, and render the child *convalescent*; and, *in* the state of convalescence, *after* acute disease, it may, *within limits*, be most beneficial.

With such restrictions, the health and life of the infant are in far safer keeping, than when they are committed to the drenching of the unscientific, often uneducated, drudge behind the chemist's counter, who thus presumes to step widely beyond his proper sphere, and may become woefully destructive.

Simple and common as the subject of my essay may appear, this very simplicity renders me fearful that I may have magnified the importance of minutiae in its elucidation. But I address the bosom of the doating mother, who, like the Roman Cornelia, regards her children as the choicest jewels of her casket—whose anxious mind would never deem that a trifling effort, which might cast one ray of light on the intricate and obscure path of childhood,—which might sooth even for one moment the slightest suffering of innocence.

PREGNANCY.

The sacred value of an infant's life is not to be regarded merely from its birth. From the moment that she entertains a prospect of becoming a mother, it is the duty of the wife to be especially cautious in the preservation of her own health ; as with it is blended that of another being, of which she has voluntarily undertaken the sole guardianship.

It is not essential that I should here explain the mysterious phenomena of pregnancy, and the delicate connexion which exists between the mother and the child ; but I cannot lay too much stress on the necessity of adopting, during this period, that cautious and regular mode of life, which may crown the fairest parental hopes by the expansion of the germ of life into its flower ;—which may avert the perils of abortion and other accidents which so constantly entail, on the mother, the penalty of disorder, or even of malignant disease,—on the child, a life of debility, of pain, or of premature decay.

The system which we should recommend is the middle course between slothfulness and undue exertion, by which the blood shall be kept in healthy circulation. The diet should be moderate (for excess of *food* rather prevents than increases

nourishment), consisting *principally* of light animal food, the juices of which are preserved. Acescent vegetables and stimulant fluids should be avoided. The regularity of the bowels should be insured, chiefly by the occasional use of castor oil, or the injection of warm water by the syringe. Excessive or painful pressure round the body, by laces or bandages, must be especially abstained from. No mental occupation or intense passion should be indulged in which has a tendency to exhaust the body, or to create undue excitement of the system.

Under this precautionary plan, safety will usually be insured; lassitude and sickness will be, to a certain degree, obviated; and the body will be free from that plethora or fulness which in itself is most prejudicial, and by requiring the frequent employment of bleeding, &c., adds a degree of danger from which the condition of pregnancy might otherwise be free.

The appetite of pregnant women is frequently most capricious. This craving or longing has proved the source of much error, the habit of indulgence to excess, which is still encouraged by the matron for the gratification of unnatural appetite, and by the nurse, under the bigoted notion that denial would entail on the offspring some mark or blemish, as a memorial of the mother's disappointment.

There cannot be a doubt of the prejudicial influence of these indulgences, often repeated. It is a foolish fancy, encouraged by ignorance, and grows by what it feeds on ; and is as irrational as that the unsatisfied longing for an emerald brooch should be followed by a bright green spot on the bosom of an infant.

It is true, that although mental inquietude, arising either from excessive longing, or from objects which excite alarm or disgust, is often followed by unpleasant consequences of a general nature,—yet this is not always the case. Still, whenever on the birth of a child any unnatural mark is discovered, the fertile imagination of the ancient gossips is immediately excited, and the obedient mother is *compelled* to recollect some event which may be warped into the cause of the defect.

The period of child-bearing, even with all our caution, cannot be passed through with impunity. Internal enlargement is productive of much inconvenience : in the early months, by pressure on the stomach, exciting that distressing sickness which is so peculiarly felt on rising from sleep in the morning ; in the latter periods, by pressure on the large veins, impeding the return of blood through the vessels of the leg, by which is produced an excessive and painful distension of the veins. This may sometimes be alleviated by abstinence,

or the scientific application of the bandage or laced stocking ; but, in many cases, it will continue until the pressure is removed by the birth of the child.

With these brief precepts I would merely inculcate, as far as may be possible, the encouragement of tranquillity and cheerfulness ; and that the mind, while it ever adopts the principle of caution, should never yield to unfounded alarm.


This injunction will be more especially requisite as the period of labour approaches ; for the patient then becomes comparatively *passive* under the dominion of those who, however charitable their motives may be, too often illustrate their rules by tales which fill her mind with gloom and apprehension.

It is to be regretted that the rules of the ancient nurse, especially, are so often founded on an erroneous principle, being either frivolous or even hurtful. So long as they are merely whimsical and innocent, they may excite in us only a smile, but their adoption often becomes of more serious consequence. The notion of *critical days* is harmless, so long as it tends to the confinement of the mother to her chamber, or to certain restrictions until a certain period—the important *ninth* day, for instance—but it is otherwise if it induces the nurse to compel her patient to *air* or *exercise* at this determinate moment, whatever may be the

state of the weather, or however inadequate the *strength* of the invalid to endure them. The same reasoning applies to the foolish superstition, which decides that the mother ought to ensure her safety and happiness by going *up* stairs before she goes *down*. If the nurse is contented to place an ottoman at the door of the bed-room for the patient to step over, it is well; but if she compels the languid mother to ascend, 'with fainting steps and slow,' to the highest attic, her bigotry should be visited by a very heavy penalty: it has often been the source of permanent mischief.

THE BIRTH.

I am anxious to be considered, in this Essay, chiefly as a monitor to the mother and the nurse. If the accoucheur is present at the infant's birth, the nurse will refer to him every subject of doubt or difficulty. It is not seldom, however, that this may be completed in the absence of all experienced assistance. In this dilemma it is essential to know so much as may preserve the life of the child, and avert danger from the mother. The first subject of anxiety is the infant's *crying*: this proves its vitality. The nurse's duty is to defend it from accident and moisture, by enveloping it in warm flannel. It is not essential that it should be instantly separated from the mother; indeed, while there is a *throbbing* in the navel



cord, their connexion may even with benefit be preserved—the vessels and parts which form this connexion still continuing to perform the function of lungs, so long as the blood flows through them. Usually, after the lapse of five minutes, or especially on the cessation of the throbbing, the division of the cord may be made—two thread-ligatures having been previously placed around it, one tied in a bow, about four inches from the navel; the other so firmly that it may prevent the flow of blood without dividing the skin, about two inches from the navel. Attention should be occasionally directed to the state of the cord, as the ligature may slip, or actual disease produce bleeding, and even the death of the child.

On the establishment of free respiration, the skin of the infant, which, at the moment of birth, is of a dull violet colour, will assume a pink or reddish hue, the blood being circulated through its vessels with celerity.

But the silence of the child does not indicate its want of vitality. If the child does not cry immediately on its birth, the cause of this impediment should be ascertained. If the throbbing in the cord continues, in a few moments the cry will probably be heard; if not, the impediment is probably arising from *mucus* in the mouth or throat, which should be removed gently by the finger; or, in some rare instances, from the folding back

or, as it is termed, swallowing of the tongue, which it is not difficult to replace.

In some instances, however, there is that feebleness of the circulation of the blood of the child, as to occasion extreme exhaustion and want of energy to expand the lungs, or even *fainting* itself. In such a state, unless the condition of the mother should forbid, the connexion of the cord should be preserved, so long as its throbbing continues. Brandy and cold water should be sprinkled over the chest, and two or three drops of wine or spirit of lavender should be given in warm water, and a state of *dry* warmth should be preserved. Extreme weakness and inability to cry may, however, arise from the premature birth or imperfect formation of the child. For this case immediate attention is not requisite.

If throbbing of the navel cord has ceased, the condition of the skin of the child must be examined. If this appears to be *peeling*, if the odour is *offensive* and the belly *tumid*, the child is dead, and should be instantly removed from the room. If, however, the colour of the skin be healthy, or merely of a light livid shade, our hope of success depends on the period during which the cord has been pressed upon so as to impede altogether the blood's passage. This we cannot know, and therefore the following plan should be invariably adopted after separating the child.

The infant should be immersed to the chin in water about the temperature of 95° or 98°. A tube or large quill should be placed in one nostril; the other nostril and the mouth being firmly closed, and the windpipe pressed against the neck, so as to close the swallow. Air should then be blown into the lungs through the tube, and the chest, when moderately expanded, emptied by moderate pressure. The slightest *rosy* tint on the skin is a proof of returning vitality, and is usually followed by sighing and the pulsation of the heart. Warmth and gentle stimulants will then effect perfect restoration.

In offering these remarks, I am not unmindful that the safety of the *mother* is yet the most important object.

On the birth of the infant the intelligent nurse will, however, not actively or immediately interfere, except in case of necessity. If no untoward circumstance occurs, the patient may lie for half an hour in quiet, the child being in the meantime washed and dressed.

A teacup-ful of lukewarm gruel may be given to the mother *if she wishes it*. Circumstances may occur, however, to which it is essential briefly to refer, in which neglect might be followed by danger and loss of life.

Flooding.—The after-birth should be examined, and should be *gently* and *gradually* pulled, espe-

cially in time of pains. If it is *forcibly* pulled, the mother may be injured, or the cord may be broken, which will add to the danger. Its extraction will often cause the flooding to cease. If it is firmly attached, and the flooding continues, or if that should continue *after* the extraction, the belly should be tenderly pressed on or rubbed with the palm of the nurse's hand (a practice, indeed, which is in all cases favourable). If this does not prevent the flow, and the patient should be faint, cloths with cold vinegar and water may be applied firmly to the belly, and a glassful of cold spring water may be given, the *sheet* only being retained as a covering. But if the patient should become *cold* and very pale, one table-spoonful of brandy in water may be given, and repeated in a quarter or half an hour; exposure to cold, of course, not being resorted to.

When flooding has apparently ceased, gentle pressure or friction may be continued for half an hour.

In extreme shivering, or during *spasm*, fifty drops of sal-volatile, or hartshorn, or a large tea-spoonful of powdered ginger or of brandy in warm water may be given.

In immediate and severe after-pain or convulsion, without extreme heat or violent headache, the nurse may venture to administer ten or fifteen drops of laudanum in gruel. This medicine should,

however, be avoided, except in *cases of emergency*.

If convulsion should be accompanied with severe *headache*, throbbing, and heat of skin, bleeding may probably be eventually requisite: the nurse, however, will relieve its intensity by applying, on linen, æther and water cold to the forehead, and a poultice of flour of mustard and warm vinegar to the calf of each leg for half an hour; at the same time administering to her patient twenty, thirty, or forty drops of the *compound spirit of æther*.

If every circumstance relative to the birth be safely concluded, and the *condition* of the patient *favourable*, she should be shifted within the hour. On this point, however, the nurse will often be required to exert her own discretion.

WASHING AND DRESSING THE INFANT.

Warm water and fine soap should invariably be employed with flannel in cleaning the skin of the child: it should be wiped dry with a napkin. In cleaning the face it is essential to be cautious, as inflammation of the eyes may result from foul or soapy water. Warm rose-water should be used with a sponge or soft flannel around the eyes, nose, and mouth. This completed, the navel cord should be wrapped in a singed rag, and bound on the belly with the roller, sufficiently firm to prevent its dis-

placement, but not so tight as to endanger *protrusion* of the navel if the pressure be irregular. This protrusion, I believe, is often the result of the present mode of applying the *belly-band*. I would direct the nurse to unfold the band about one yard, and then to bring the ends *over* and *across* the belly, instead of *commencing* the binding *on* the navel.

The breasts of infants are sometimes distended with a milky fluid, which, as it is not detrimental and is soon absorbed, should not be forcibly expressed, as such interference may inflict much injury.

Occasionally, the down, or small hairs, on the backs of infants become loosened from the bulb, but not detached entirely. They excite constant *itching*, and are sometimes productive of *pimples*. These consequences are soon removed by warm bread poultices, and extracting the hairs with small forceps.

Scurf, or *dandriff*, is the result of neglect. When it is first formed, however, it may easily be removed by washing with fine soap and water, and then brushing the skin with a fine brush.

The dress of the child should be moderately loose, and the pressure should be as uniform as possible, too violent compression of the belly being often the cause of disorder of the bowels and of rupture.

The dress should be simple, and as free from pins as possible, and above all, of needles, which have sometimes penetrated and become imbedded in the flesh of the infant, several of which I have been called on to extract by operation. A small shirt next the skin protects this delicate covering from the flannel, which should be of the white kind, and should never be allowed to continue when it is wet, as the odour of the *ammoniacal gas*, which is evolved by the heat of the child's body, is most offensive and extremely deleterious to its lungs. The employment of a *second* flannel over the first, to prevent the upper clothes from becoming wet, is a very baneful error, as the surface of the skin is chilled by its retained moisture, and it is the common cause of chafing and ulceration about the folds. The head of an infant should not be too closely covered: the blood is circulating there so freely, that too close a cap even is often liable to produce real disorder of the membranes of the brain; but it is scarcely possible to keep the lower part of the body and the arms too warm, which being at a distance from the heart, the centre of circulation, will frequently become chilled to that degree as sometimes to produce a loss of vitality, and very often materially weaken the action of the limbs, and this especially in feeble children. A deficiency of blood thus circulating in the limbs, the *head* will be *too abundantly* supplied,—the con-


sequences of this excess will be immediately anticipated. During the changing of the dress, moderate friction should always be employed, especially on the belly : it is agreeable to the feelings of the infant, and promotes free and healthy circulation, and, above all, assists the process of digestion, and prevents the accumulation of wind.

Previous to the suckling of the child, a small quantity of sugared water may be given to it for the purpose of removing the mucus usually collected in the throat.

About the sixth or tenth day the navel cord usually separates ; but if it remains for a day or two merely attached by a thin or slender skin, it should be carefully separated with sharp scissors.

Occasionally a small red *fungus* will sprout from the navel, which discharges matter, and obstructs the process of healing. If it be attached by a narrow footstalk only, this also may be safely separated by passing round it a fine silk thread. If, however, as is most common, it consists of a small, round, button-shaped tumour, it may be easily destroyed by sprinkling it lightly with calomel every second day until it heals.

The progress of life is marked by certain periodical conditions, which have caused the division of childhood into three epochs : 1. The interval between birth and weaning, or the cutting of the



first twelve milk teeth, the first year; 2. From this period until about the termination of the fifth year; 3. From this period until the twelfth. The irregularity of infantile changes renders this division uncertain as regards the exact period, still, attention to these circumstances is of some consequence, as regards their influence on domestic management.

ALIMENT.

SUCKLING.

Nature has imparted to the milk of the mother for a short period after the birth of her child, a peculiar property which exerts a degree of influence over the evacuation of the dark substance, termed *meconium*, an influence almost always sufficient, without the aid of any laxative. The commencement of some early infantine disorders may be often traced to the retention of this viscid matter, which will sometimes adhere firmly to the inner surface of the bowels for many days. It then becomes acrid and irritating, altering the nutritious property of the milk itself. From this cause may result gripings, fever, convulsions, and sometimes death itself. It is not, therefore, until its complete evacuation that the inner surface of the intestines is

adapted for the separation of the nutrient juices from the food. This is indicated by the evacuations changing to a bright orange hue, an almost unvarying test of the healthy condition of the bowels.

The milk is the birthright of the infant. As instinct impels the infant to the mother's breast, and has inspired that breast with maternal love, this beautiful link in the chain of nature should never wantonly be snapped asunder. The nutritive fluid of the mother is so congenial to the infant's stomach as to form the basis of the proverb 'like mother's milk.' In Greenland and the Esquimaux regions it is deemed the only food adapted to the infant. Their fat and acrid diet is considered so prejudicial, that her infant is often *buried* with a suckling mother, who has died.

Among the Roman matrons the custom of suckling was constant. Inability to do so was scarcely known among them, as the energy of the body was preserved or increased by their active habits, the regular custom of bathing, the infrequency of carriage exercise, and the loose folding of the chemise around the bosom, by which the circulation and secretion of the breast were not impeded. To these judicious modes may, in a great degree, be referred the activity and strength of the Athletæ, or wrestlers, and the heroic feats of their warriors.

The act of suckling is both a duty and a mutual pleasure—

‘The starting beverage meets the thirsty lip—

’Tis joy to yield it as ’tis joy to sip.’

Indeed, every mother is guilty of lessening her own maternal dignity, who does not avail herself of that fountain of nutrition which nature has bountifully bestowed on her as the support and preservation of life. How exquisite is the story of the Venetian mother, who, seeing with extreme agony her child creeping towards the edge of a precipice, spite of all her endearing tones and epithets, suddenly unfolded her bosom to its view, and by that powerful magnet instantly drew her infant from destruction to her trembling arms! I may add the bright example of the Grecian daughter, who, by the stream from her swelling bosom, successfully fed the life of her feeble and imprisoned father, to illustrate the sacred value of that bosom’s balm which could thus, as it were, resuscitate the second childishness of age.

It would be affectation to assert that disposition and passions are constantly communicated to the child from its foster-mother—that the tyrant Nero imbibed his ferocity from his nurse—or that filial attachment is always weakened by wet-nursing, unless it be protracted to an undue period, when moral sentiments influence the mind; but it is to be much regretted that the slavery of fashion

should so wilfully inculcate that apostacy to the law of nature, which exiles the infant from its mother's bosom to be nurtured on that of a stranger. It is wonderful that this unnatural error should have so long deluded the fairest portion of creation to wander from the paths of pure simplicity, in tearing asunder those delicate bonds of natural affection which creative wisdom has cast over the progressive periods of the nurture of offspring!

Adapted to the duty of suckling, nature has established a series of *new* actions in the system of the mother: if these are thwarted her health will, in some degree, suffer. The turgescence of the breasts, if the milk be unduly retained or suddenly repelled, will cause increased flow of blood to the *head*, and will produce a train of painful symptoms locally; from the neglect of the breasts, milk-abscess may take place, or tumours may be formed by the coagulation of the milk, which may form the basis of irremediable disease. The importance of the act of suckling may be proved by the influence it possesses even over complaints of *long* duration, which have been known to yield soon after the duty of nursing was performed.

The instinctive love of offspring is almost universally witnessed even among the most ferocious brutes—they will die to defend their sucklings: the hen bird will become a heroine immediately

after her incubation is completed, and will attack the most formidable of feathered tyrants ; and yet, although I may be deemed a severe moralist, I cannot conceal that the mother who is a voluntary slave to fashion may often indirectly contribute to the decay of her child, by devoting it to the cold and often heartless bosom of the wet-nurse. The calculation I have formed, regarding this fatality, is in proportion of nearly one-half before the age of three years : by some the amount has been placed at more than one-half.

The natural incapacity of the toothless mouth of an infant for the process of mastication, and of its stomach for the digestion of solid food, forcibly inculcate the duty of suckling. The food should be dissolved, half digested, and already prepared for nourishment, ere it is admitted into the infant's stomach. These qualities are admirably combined in the maternal milk, the stomach of the child having little else to do than to absorb its nutritious portion.

The maternal milk, if it be healthy, may constitute the only food of the infant for four or five months. Of its good quality these are the proofs : it should be secreted in sufficient quantity ; possess an agreeable sweet taste, and but very slight odour ; its consistence should be that of cow's milk when settled ; it should be faintly tinged with blue without *streaks*, and should possess the

property of coagulation, or *curdling*, which may be proved by dropping into it a small quantity of vinegar.

If the mother's breast contain milk at the fifth hour, and it should accumulate quickly, the child should be applied to it, to avoid its distension, which renders suckling more difficult and painful. This early suckling is more in regard to the mother than her infant; and, therefore, if the mother's milk be not sufficient, it is not essential to *feed* the child for ten or twelve hours after birth. It is not necessary to observe, as some nurses dictate, *regular* periods of suckling, nor should the mother be guided solely by the painful distension of her breasts. Such undue supply will occasion flatulence and griping. The nurse should be chiefly guided by signs of hunger in the child, evinced by its turning to the nipple, and by slight restlessness or fretting. Still, however, I would recommend such regulation that the infant, from its own want, should be fed at six, seven, or eight o'clock in the evening; it would then probably awake, or may be awaked, about eleven, and would then turn to the breast. During the night, if it appears to require it, and is fretful, it may again be suckled; usually, however, it would not require the breast until five or six o'clock, as the infant will by habit sleep quietly throughout the night.

It is a custom with some mothers—very often with the hired wet-nurse—to allow the infant to lie all night with the nipple in its mouth. This may prove a baneful practice; the stomach may become loaded, the infant will become too much heated, and there is a danger of its being hurt by pressure, or even inadvertently smothered by its nurse.

In regard to the act of suckling, I would inculcate the occasional removal of the infant from the breast for a minute or two to avoid too rapid a distension, the common cause of acidity. I do not mean that the suckling should be for a short time and at long intervals, because I believe that the first portion of milk which is sucked from the breast contains less butter and curd than that which follows, and consequently must be less nutritious.

When the mother is sitting, the position of the sucking child is peculiarly favourable for the passage of milk into the stomach. This is not the case when the child is horizontally lying; indeed, I have known some children, as it were instinctively, continue to refuse the breast in this position, and take it when restored to the *semi-recumbent* posture.

After suckling, children should be laid in the cot or on the lap, rather on the right side, to favour the descent of the food.

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I have said that slight fretting is an indication of hunger : this must, however, be distinguished from violent crying, the expression of *pain*. Under these circumstances, the *cause* of pain must be discovered, and the remedy applied ; but it is a frequent error to offer the child the breast to *still* its cries, and, as the child will often eagerly take it, the stomach will become thus distended, and the disorder itself be aggravated. But it is not difficult to discriminate between the *healthy* and *diseased* causes of the child's taking the breast.

If the infant is incited by a natural *desire for food*, it will usually continue to move its lips in the act of suction, *regularly* from time to time, moving its head as if—to use a common phrase—it could not *make enough* of the breast, and perhaps occasionally smiling, or, if old enough, uttering a suppressed laugh, and stretching its little hands to its nurse's lips, to be kissed. These are indications of delight. If, on the contrary, it takes the breast as a resource from uneasiness, it will fix *eagerly*, like a leech, and then either lie in a listless, languid, or half-torpid state, *without* the act of suction, occasionally starting, and perhaps fretting ; or it will, after eagerly fixing, suddenly quit its hold, and appear to seek some other mode or object, which may afford it more alleviation.

It is essential that the suckling mother or nurse

should, as often as possible, breathe pure air, unalloyed by noxious effluvia or the contamination of powerful gases, &c. Her bed-room should be cautiously ventilated, and the curtains of the bed should not be too closely drawn.

Her diet during suckling should be regulated mainly by her usual custom. Nutritious it should ever be. I would apportion two pints of porter in the day for sedentary nurses, or one pint and a half, with the addition of gruel or sago, which are very productive of milk, and that of a very bland quality. They should be confined to two moderate meals of animal food in the day. Salted meat, vegetables, and, above all, *acids*, should be avoided.

It is an error to suppose that food of a stimulant nature, as spices, wine, &c., is nutritious. Their effect is, on the contrary, the *diminution* of the quantity of milk, in consequence of the fever, and sometimes inflammation which they excite. We may often observe the production of various eruptions by stimulant diet, which as readily disappear on its discontinuance.

In consequence of this excitement, or from other causes, especially in plethoric nurses, it may sometimes be advisable to abstract blood: the system being thus lowered, the supply of milk, which had been much diminished, will be restored. It may

be remarked that pale and often spare women supply the greater quantity of milk.

There are causes which influence the child's health through the *medium* of the milk, although the nurse herself may be unconscious of such effect: it may not be suspected even by the medical attendant. Decayed or painful teeth, also, will often so influence the milk as to cause extreme disorder in the child. We have recorded instances in which extraction of these has been instantly followed by amendment.

In other instances, mercurial or other of those remedies, which may indeed be denominated poisons, may be taken for a long time by the suckling nurse, and pass through *her* system inert; but, in consequence of the excessive flow to the breasts, their powerful qualities may be imparted to the milk, and prove most detrimental to the infant. This should enforce very great caution on this point.

As there are various circumstances which incapacitate the mother for suckling, so there are some which incapacitate the infant itself. Such are the tongue-tie, deficiency of the palate or roof of the mouth, and malformation of the lips. These require surgical treatment. It is seldom that the tongue is so bound down as entirely to prevent the action of sucking; but I have occasionally ob-

served such a condition. This should be relieved as soon as it is discovered. The two evils arising from neglect will be, *emaciation* from deficiency of nutriment ; or, even if the child draws as much milk as will support its existence, the constant *efforts* rendered essential by the imperfection will induce fever, and indeed almost every early infantile disorder.

MATERNAL INCAPACITY.

My observations have hitherto referred to those mothers who possess a perfect or efficient capacity for nursing their children. The circumstances which render *maternal* suckling ineligible or impossible, are these :—

Detrimental effect of suckling on the health of the mother.

Deficiency of supply of milk.

Unwholesome quality of the milk.

Malformation of the nipple.

Inflammation or abscess of the breast.

Malignant disease of the breast.

Total suppression of the milk.

Mental disorder.

Some of these objections, however, may be merely of a temporary nature.

The *detrimental effect of suckling* on the mo-

ther may often be obviated by invigorating her system, and in some cases by *moderating* the supply to the infant. Exercise and country air will generally prove very beneficial, and the warm shower-bath will produce very salutary influence ; but if a favourable change is not *speedily* effected, the experiment may prove fatal to one, or ultimately to both.

Mere *deficiency of milk* may be amended often by appropriate treatment : *malt tea* or *treacle whey* will often increase its secretion. If much debility exist, the following draught will be beneficial :—

Of calombo root infusion, one wine-glassful.

Of wine of iron, ten or twelve drops twice in a day.

And even should the mere deficiency continue, it has been recommended to adopt a *partial* or middle plan of nursing—to supply the mother's deficiency by the *addition of artificial food*.

This mode I am not inclined to recommend. Continued deficiency in the supply of milk, if it does not depend on actual deficiency of food in the nurse, usually (not always, certainly) indicates some fault in *quality* also. This must depend either on some want of energy in the vessels of the breast, or some constitutional debility or disease. As it would be extreme folly to select a wet-nurse with this incapacity, so it must at least

be injudicious in a mother so circumstanced to contribute a moiety only of supply, especially in a very young infant. It is true the plan is very often resorted to, and I have seen it adopted with impunity, but most commonly the effect is unfavourable. If the plan be adopted, I should recommend that the artificial food be confined simply to that fluid most assimilated to the mother's milk, to which I have alluded in the remarks on dry nursing.

The *unwholesome quality* of milk may be either *presumed*—if there be any suspicion or evidence of scrofulous taint or other contamination of the system, indicated by scars, ulcers, copper-coloured spots, bleeding or spongy gums, or other diseased appearances—or *positive*, from the appearance and condition of the milk itself. I do not think that simple fever has the effect of imparting *through the milk* its influence to the sucking child.

Among the causes which deteriorate the milk, even in the earlier months, may be ranked the influence of *maternal solicitude* during the illness of a child. If the milk be secreted in the usual quantity the mother continues in her office of nurse, unmindful or unconscious of the change in her milk from nervous influence, and thus she is actually hastening that catastrophe which she is momentarily anxious to avert.

Malformation of the nipple may usually be remedied. If it be merely small or deficient in prominence, it may be drawn out by the nurse; even the infant, unless it is feeble, may soon succeed. If there should be a probability of this defect during the later months of pregnancy, firm pressure on the nipple should be prevented. The nipple may be gently drawn out by a healthy and confidential nurse; or, if it be not objected to, a young puppy may be occasionally applied to the nipple about the seventh or eighth month.

If there exist a simple sore or cracking of the nipple, a shield should be employed, and care should even then be taken that no blood is sucked from the fissures or the wound, which might much derange the functions of the child's stomach. In these excoriations much advantage may be derived from the application of *pyroligneous acid* with white of egg, or *Tutty* ointment. In some cases we have derived much benefit from the careful application of gold-beaters' skin, or the thin caul of a calf, around the nipple, leaving the orifice *unclosed*; the infant will fix on the nipple thus protected.

Where there is a tendency to soreness this plan should be adopted very early, before the infant first fixes on the nipple; and it will then often obviate all the inconveniences previously felt from neglect of this caution.

Extensive inflammation, or abscess of the breast, and malignant disease, and of course total *suppression* of milk, whether arising from want of the gland of the breast, extreme debility, fever, or internal inflammation, constitute determined objections to the act of suckling,—on which, and on the incapacity from *mental* disorder, no comment can be required. It is then essential to adopt one of two modes—wet-nursing or dry-nursing.

WET-NURSING.

The objections to the engagement of a wet-nurse are the evils arising from want of maternal tenderness and attachment; and the indirect offering of a premium for immorality, by the eager selection of *unmarried* women for the situation. The forfeiture of chastity, however, does not always indicate real depravity.

The offspring of a tender and affectionate woman (and such qualities of mind should be moral essentials in the wet-nurse) will ever engage the greatest share of her attention. This consideration simply should abolish the injudicious custom of the wet-nurse supplying her own and another's child with nourishment, or even (unless the most implicit confidence is felt) of the infant being sent to the cottage of her who is engaged to suckle it. Favour—the innate motive of the mother's heart—would be lavished on *her own* infant, to the detriment, perhaps destruction, of the little stranger. Affection would prompt her to practise the precept—'Charity begins at home;' and she would think herself sanctioned in the pious fraud of robbing another to supply the natural wants of her

own child; otherwise (as the comparative mortality of dry-nursed children will prove) that child would very likely fall an early victim to negligence. These misfortunes will not occur under the mode most eligible—that of domestic wet-nursing in the nursery of the mother, who should be constant in her attendance there, performing all those affectionate duties herself, which do not intimately depend on the act of suckling. High moral qualifications are sometimes found among nurses as in other classes. But without encouraging universal suspicion, we must feel assured that we cannot be too watchful over the conduct of the wet-nurse. The very frequent habit of administering empirical *anodynes*; of even smearing the nipple with opium, to lay to sleep a fretful nurse-child; and even the possibility of changing the children, by which the claim to inheritance of title or of fortune may be disputed, and become the source of protracted and ruinous litigation, enforce the necessity of this caution.

In the choice of a wet-nurse, we cannot hope to discover in one that affected catalogue of high qualities which we have sometimes seen drawn up in books on the subject of nursing. It is sufficient that she be healthy, and have a proper supply of good milk. The birth of her own child should not have been far distant from that of her nursling; her age between twenty and thirty-

five years. Both her breasts should secrete milk, to ensure a constant supply, and prevent distortion or squinting in the child, from being constantly held in one position, and the same eye being as often exposed to the light. The milk should flow in a *moderately* free stream; that difficulty of drawing may not cause the swallowing of air, render the nipple sore, or fatigue the child, or that, by too great rapidity of flow, the infant may not incur the danger of being strangled. The latter case may, however, be easily remedied by compression with the nurse's fingers.

It would be judicious to reject a nurse if four months have elapsed, or if her monthly flow has occurred subsequently to her delivery.

If wet-nursing has been commenced, and the infant appears to dwindle, or to be disordered, the nurse should be changed; and this change should be repeated if it should be decided that the mischief depends on the milk, and not on disorder of the infant arising from other causes.

The precepts which I have written for the regulation of the suckling mother will, of course equally apply to that of the wet-nurse.

DRY-NURSING, OR BRINGING UP BY HAND.

The only circumstances which can render this mode eligible (where some insuperable impediment exists in the mother) are the advantage of keeping the infant and its nurse almost always under the immediate direction of its mother, or some moral or sentimental objection which the mother expresses against the nutrition of her child by the milk of a stranger.

The first is a feeble motive ; unless the circumstances of the parents cannot allow the admission of a wet-nurse into their establishment.

The second objection is equally unreasonable, depending on caprice, or a species of jealousy which should be conquered, when the safety or even the life of the infant is implicated.

Where, then, a healthy and confidential wet-nurse can be obtained, such objections should be overruled when we contemplate the great comparative mortality among dry-nursed children. Dr. Merriman has investigated this subject, and his conviction is, that in London, six out of eight children so treated fall victims to the mode. In the purer air of the country, and especially during the temperate and dry months, the mortality is somewhat diminished. Contrasted with this, is the infrequency of infantile death in northern cli-

mates, and, indeed, wherever the practice of suckling is general.

It will be unjust, untrue, to deny that many of our most healthy children have been entirely brought up by hand ; but if we comprehend the full scope of examples, the contrast will be melancholy, and will point, as its consequences, to many of the most distressing diseases of children. If possible, however, these diseases so excited should be destroyed in the bud, by a supply of healthy breast-milk. By thus removing the cause early, the effect will usually cease ; and it surely must require no argument to convince the mother of the vital importance of healthy breast-milk to her infant's welfare, if, during the early course of dry nursing, it continues to dwindle in defiance of other efforts to relieve it.

If dry-nursing is decided on, it is essential to attend both to the *mode* of administering the food, as well as its kind or quality. Although the fluid food of the infant does not so much require the mixture of *saliva* to assist digestion, yet I believe a degree of mastication, which increases the flow of this fluid, will usually be beneficial. For this reason, I discard the employment of the boat from the nursery—the mode of feeding with which is most objectionable. The boat is replenished and laid on the tongue of the infant ; the food is poured on those parts of the throat, the *irritability*

of which immediately prompts them, in self-defence, to the act of swallowing. Hence, so long as the supply is afforded, so long will the infant receive it, until distension of the stomach, with its train of maladies, ensues.

This is really a mild system of *cramming*: yet, will some thoughtless nurses still act on this absurd notion—that as long as the capacity of the stomach enables it to *receive* food, so long ought it to be replenished. I should think *their own* distress after a very full meal would prompt them to spare from the miseries and dangers of over-feeding these helpless victims of their folly. The most judicious mode, because the nearest approximation to the nipple, is the suckling-bottle. In its use, however, great cleanliness must be observed. The mouth of the bottle should be covered with wash-leather, or the nipple of a young heifer, in which a small piece of sponge is placed, in imitation of the pores of the nipple, to prevent too rapid a flow. The first is more easily kept clean; but the second is the most acceptable to the child, and, indeed, more eligible, as it brings the necessity of constant cleansing; it should be removed, and its sponge withdrawn after each supply to the infant, and kept in rose or distilled water, with a few drops of spirit of wine, and re-applied when it is again used. On the failure of this caution, portions of the curdled milk or of

the farinaceous food, which is constantly prone to become sour, will be left in the bottle, or will adhere about the neck or in the teat, to mingle with, and vitiate the fresh supply.

Of the species of artificial food, that which is easiest of attainment, and most resembles the milk of the mother, is the following ;—

Fresh cow's milk, two-thirds,

Spring water, one-third ;

well sweetened with loaf sugar, which is the least liable to acidify and cloy. It is the large proportion of sugar, the bland and nutrient property which renders the milk of the mare and of the ass so nearly resembling that of the mother, for which they are the most eligible substitute.

The milk so prepared should be heated to a moderate temperature in a basin of hot water or a sand-bath. By being heated over the fire, it may become impregnated with impurities ; and, by being brought too nearly to the boiling point, it might lose, by the formation of the film on the surface, some of its nutritive properties. If, to preserve it, boiling be deemed requisite, it should very quickly be boiled, and as quickly cooled in cold water, which may prevent the separation of its parts. The periods of feeding should not differ from those observed in suckling from the breast.

When the child has cut two of its front teeth, the consistence and nutrition of its food may be

a little increased, by adding to the milk, gum-arabic water or arrow-root, or other simple farinaceous substance.

The judicious nurse will soon discover that kind which is most congenial to the stomach of the child: its being prematurely rejected by puking; its proving the cause of flatulence; or of undue relaxation; or of apparent distress to the child after its being swallowed—either of these consequences will render a change essential; I, therefore, consider it perfectly useless to give a catalogue of those varieties of food which must be submitted to the cautious experience of the mother.

WEANING.

The period at which the process of weaning should be commenced must be of course indefinite, as it must depend on a variety of circumstances. Indisposition, or inability in the mother or the nurse, as it would hinder them from undertaking the duty of suckling, will, if it occurs *during* that process, impel them to discontinue it. The occurrence of pregnancy also calls the propriety of the continuance of suckling in question. To compensate the system of the mother for the expenditure of her own nutrition and strength in bringing to perfection the new creature, an adequate supply

must be afforded her : hence the secretion of milk—a process inferior in importance to the higher function of child-bearing, will be affected, and it will become impoverished in quality. The monthly indisposition, too, especially if its flow be profuse, will often render it essential to discontinue suckling.

Even under the most favourable conditions, nature has ordained a limit to this duty—not always by suddenly checking the formation of milk, but indirectly, by the very frequent excitement of disorder, if it be protracted beyond a certain period. The effect of maternal exhaustion, the result of protracted suckling, is not confined to the mother or the child ; it is influential to both, and is a succession of evils. It may be truly said, that the infantile disease excited by milk of a deleterious or simply impoverished quality, grows by what it feeds on, and we shall witness the maternal weakness and the infantile disorder running their course together. Wasting of the child is the natural consequence of this error ; but its effect is also evinced by the occurrence of other disorders. A defective nutrition predisposes the infant to become influenced by comparatively slight excitement ; and thus, in addition to the *direct* production of disease, it becomes, *indirectly*, its predisposing cause. Under its influence, especially the lining of the stomach and bowels, and the membranes

of the brain, readily take on inflammatory action—the first being the frequent forerunner of wasting and decline, the second of hydrocephalus or water about the brain.

After the eighth, ninth, or tenth month, if the child has cut three or four of its front teeth, and appears in good health, the process of weaning should not be delayed, the first period of childhood being then past. It is a process, it must be owned, of much importance, as its results are often unfavourable to the child;—it is a renouncement of its earliest habits, and is frequently marked by disordered functions and derangement of general health, the result of mere change of food. The most frequent malady is that protracted relaxation of the bowels termed the ‘weaning brash,’ which appears to be most frequent in summer and autumn; and in the male oftener than the female infant. This disorder does not always appear immediately on the commencement of weaning. I have witnessed it five weeks subsequently. It is marked by frequent evacuation from the bowels, and, occasionally, during the nausea, from the stomach of mucous or green fluid, attended with pain. On this, ensue loss of appetite, wasting, fever, and fretfulness; and, towards the termination, tumefaction of the limbs, stupor, and convulsions. I would advise, if age and all other circumstances are favourable, that weaning should

be adopted in the more temperate months—March, April, May, and October.

On the commencement of weaning, it is especially essential to administer the food sparingly and cautiously. It is judicious to confine it as much as possible to one or two substances, unless an entire alteration is advised; and on this account various articles of diet require different periods for the accomplishment of their *assimilation*, or conversion into nourishment. Their stimulus, on admission into the stomach, promotes such secretion of the *gastric juice* as shall be sufficient to convert certain portions of this mass into *chyle*; but this secretion may be checked before the essential property shall have so disposed of the residue of this mass, which will either thus remain, and become a burden to the stomach itself, or pass *undigested* into the bowels, proving a source of much mischief to the body. It should be a rule, therefore, to administer food which is speedily and easily digested, and not to endanger accumulation by its too frequent repetition. I have often been able to trace *bowel complaints* simply to small quantities of pudding, milk, or broth, given at very frequent intervals; and it will engender an habitual craving in the child for more food than is consistent with its health.

The consequences of over-feeding, especially with solid matter, (for it does not deserve the name

of nourishment when administered in this excess,) are woefully destructive of the tone and functions of the stomach. Distension, griping, wasting, with their characteristic convulsions, are among the immediate effects of this common error. This over-feeding is often adopted for the purpose of *strengthening* weakly children. Most strange is it, that the nurse will not learn that the stomach *partakes* of the *general* debility; and that, the *more* it is loaded beyond a moderate degree, the less is it enabled to absorb *nourishment*; and, so far from strength being added, debility continues to increase. But even if this excess of feeding does prove an excess of nutrition, it is an error no less flagrant; and we must, at the same time, wonder at, and deprecate the foolish pride of that mother, who shall appreciate her child as she does her capon or her pig, by the mass of matter which composes it.

The progressive development of the body should be our guide, in regard to our administration to its wants and its indulgencies; and we should recollect, that Nature, consistent in all her institutes, never designed other than liquid or mucilaginous food for an infant, whom she had not supplied with teeth fit for mastication. When, however, teeth are formed, there is a corresponding energy imparted to the stomach and bowels.

The first food on the day of weaning (if the

partial plan of rearing has not been adopted) may be arrow-root, with sugar, and a small quantity of cream; or cow's milk with sugar, and a little hartshorn jelly, to correct that acidity which is often possessed by the milk of animals which feed solely on vegetables. To these may be added (although this selection must be tested by experiment) biscuit-powder boiled in water, and mixed with milk; panada; prepared wheat; soujee; rice gruel; baked apple; boiled turnip; strong chicken tea; with once or twice in a day the wing of a chicken grated; or rice biscuit mixed with the gravy of lean beef or mutton, diluted with water. The mode of extracting this gravy should be, the boiling the meat in a bottle, and pouring from it the pure gravy. The temperature of the food is a point not sufficiently regarded. It should be invariably *tepid*: if too hot, it may debilitate the tone of the stomach; if too cold, it will check that secretion of its juice which is essential for digestion. Fruit is aperient; and, therefore, small quantities of currants or raspberries may be indulged in often with advantage, unless relaxation be present. The skins, however, of all fruits (being, like vegetables, difficult of digestion) usually pass away entire.

Subsequently to weaning, the child will frequently become *thin*—a change which is not essentially diseased if unconnected with symptoms

of an unfavourable nature. It may be, in fact, a natural and healthy change, dependent on more solid nutriment. But if, added to emaciation, fever or irritation be present,—if there is a *flabby* condition of the muscles, and a folding or *bagging* of the skin, together with a pallid hue, the child is in a state of disease, and must require immediate attention. The safety of the child will often depend on its being restored for a time to healthy breast-milk.

If there is much difficulty in weaning the child from the breast, aversion to the nipple must be excited by the smearing it slightly with mustard or other nauseous or pungent substance. The custom of *chewing* the food of the infant by the nurse cannot be too much deprecated; it is disgusting, and may even communicate disease. Shortly after weaning has been accomplished, *latent* diseased dispositions are liable to be called into action: glandular swellings, incurvation of the bones of the limbs, &c., should therefore be immediately, on their being discovered, referred to medical advice.

About the second year, when the process of dentition is, as it were, resumed by the cutting of the *canine* and some of the *double* teeth, it is most essential to observe a judicious domestic management—to be especially cautious of *repletion* or full feeding. The system is in a state of extreme irritability, and prone to inflammatory disorders.

The diet should at this time be light, and laxatives should be frequently given. I may add, that children should not be teased by their *antipathies* being disregarded: the stomach may loathe certain articles, and possess a peculiar inability of digesting others. On the attainment of this period, the most important epochs of infantine life are past.

If the milk at the period of weaning be in full quantity, the nurse must not disregard it, especially if distension and pain are present in the breast. She should immediately diminish the quantity and quality of her diet, and should take occasionally a laxative of castor oil. The breast should be gently rubbed twice or thrice in a day with spirit of wine and some bland oil, and the milk drawn from them; the repetition of this being gradually diminished as the milk decreases. If the breast is distended uniformly without pain, a soft diachylon plaster may be applied; and if there be neither distension nor pain, it is scarcely necessary to interfere with them, except by an occasional laxative of castor oil. The breast will often continue to secrete a *small* quantity of milk even for months subsequent to weaning. This circumstance will be occasionally referred to us, with some anxiety, by the mother: such fear is needless; the milk thus secreted is not long retained, or in a congealed state; it is either ab-

sorbed, or it oozes gradually from the nipple, a fresh portion being formed in its place. Under the treatment which I have alluded to, this will gradually decrease and disappear.

THE NURSERY.

The removal of the child to the established nursery must be regulated by circumstances. If the mother suckles her child, or adopts the partial plan, her bed-room is the apartment best fitted for the purpose, during the month. If the child is wet-nursed, or brought up by hand, the feeding may also take place there; but, if the mother be much indisposed, or if the fretting of the child annoys her, the nursery, if adjacent to the bed-room, may be adopted. Subsequent to the month, the nursery and the bed-room may be alternately or indiscriminately employed.

The nursery should be removed as far as possible from the kitchen, or from any manufactories where steam, or fires, or noxious gases are produced which can influence its atmosphere; and from the vicinity of drains or water-pipes, the moisture of which must ever prove prejudicial to the delicate health of a child.

The room should be capacious and lofty, and capable of being freely ventilated. The floor should be composed of boards which do not, like

deal, absorb moisture, but become readily dry by the action of air, without a necessity of the baneful employment of charcoal. It should be supplied with Venetian blinds, which may moderate the light of mid-day in cases of disease of the head; and it will be well, on this account, to employ for the furniture, materials of the dullest colours. No chinks or crevices through which a stream of air could be admitted, should be allowed to remain; and if the door is opening immediately on the top of the stairs, care should be taken to place a screen to intercept the air-current which is constantly passing along the staircase.

The temperature of the room should be within the limits of sixty and sixty-five degrees of Fahrenheit; which is the temperature also that I would adopt during the course of the eruptive fevers—as scarlatina, measles, and small-pox.

We should avoid the processes of cooking, washing, and ironing in the nursery—heat and steam disposing the child to disease. The cups and mugs used in the nursery should be composed of substances which are not liable to be broken. They should be, as well as knives, forks, and spoons, of ivory or horn. In large families of children, I would recommend an ante-room to the nursery, to which the inmates might be removed when the nursery is being cleaned or aired.

The floors should be covered with soft drugget,

which may often avert accidents ; but it is essential that it be cleaned, and well dried once in a week. The furniture should be as scanty as convenience will allow, that the space of the rooms should not be too much diminished. Paint should be employed as little as possible. Stoves in the centre of the nursery are most unwholesome for various reasons. The night-lamp should never be allowed to burn but in the chimney, as its combustion constantly deposits its soot or lamp-black dust, which is inhaled by children, and becomes hurtful to the lungs.

REPOSE.

The usual position of an infant should be nearly horizontal. In the perpendicular or sitting posture, the soft and flexible condition of the bones of the spine, then scarcely more than cartilage, allows them to be readily bent, or to project in an angular form—an injury which, if not speedily relieved, leads to permanent distortion. This distortion, I am inclined to think, is also sometimes produced by the nurse violently shaking the child during the cartilaginous condition of the bones ; an error in nursing which, like the violent rocking of a cradle or chair, or even constant swinging of the cot, is a cause, too, of disorders of the brain in children.

It is a common fault with nurses to accustom

infants to lie constantly on the lap, and to form that lap into a deep hollow by the expansion of the knees; the child thus sinks into this cavity; its spine is consequently *curved* outwards—a form which, by constant bending, becomes permanent. Children will not be averse to lying or sleeping on a bed, if they are early accustomed to it.

Among the Hindoos the children are constantly laid upon a mat or quilt on the floor; and, by thus being allowed to exercise their limbs, and roll to and fro, continue in a state of health proverbially excellent. In Canada and Brazil, children are laid upon raw cotton in baskets covered with fur. In Peru, their couch consists merely of a cloth laid in a hollow of the earth; and in other districts of the American continent, the infant's rough cradle is filled with dry and clean sawdust. I adduce these instances to prove the peculiarities of custom, and the salutary consequences of *freedom*; for, by all these modes, the infants are gratified, and become, at the same time, healthy and robust. Yet we still find *our* nurses fall into the vulgar error of swathing tightly—a custom constantly employed in Italy, for the purpose of making the infant *grow* the faster!

A mattress, then, is the most beneficial couch for children. The feather-bed so confines the limbs as to prevent that lively motion and free circulation of the blood which is conducive to per-

fect health. Weakness also will ensue from the continual perspiration which a soft bed induces, and the infant's lungs may be hurt by dust frequently escaping from the feathers. We must, at the same time, remember that sleep has the effect of diminishing the *evolution of heat* ; therefore, the infant should be watched during sleep, that the temperature of the body may be regulated. In cold weather, additional warmth to the mattress is easily supplied by an additional blanket.

Children should be kept, during sleep, as *separate* as possible, as their dispositions to slumber are seldom simultaneous ; the restlessness of one will prevent the sleep of the other, and sleeplessness is a frequent cause of fever. In warm weather, too, one will often throw off the clothes when the other is in a state of comparative chilliness, in which condition an exposure to increased cold may be most prejudicial.

Children should be accustomed to sleep in twilight and in the dark ; and the custom of keeping them awake by amusement, and, above all, of telling them stories of supernatural influences or of terrific interest, should be anxiously avoided. Still, it would be well to accustom them occasionally to sleep in the midst of some noise, that light sounds may not disturb them in their slumbers ; as the sudden waking of a child will alarm it, and may induce disorder.

The healthy infant is certainly a most luxurious epicure. It is almost constantly asleep when not feeding. If its disposition should be, on the contrary, restless, it would be right to keep it occasionally awake during the day, that its sleep may be obtained chiefly during the night.

Extremes of heat and cold are, of course, highly prejudicial to the child. It may, therefore, be advisable not to allow it to sleep quite alone in *cold* seasons ; nor to be long folded close in the nurse's arms during warm weather.

Children are naturally early risers ; the morning sun awakes them. This disposition should be always encouraged. They should be sent early to bed ; and, immediately on waking at a proper hour, should be dressed and washed ; as lying awake for a long time in the morning induces languor and other evils.

The *motive* powers of a child should be allowed to find, as it were, their own level. It should be permitted to commence by creeping on the carpet, which it will generally attempt to do about the commencement of its teething, or between the sixth or eighth month. Care must, however, be taken to keep the carpet or floor free from pins or other lacerating bodies. Instinct will dictate the period at which the child should be gently held on its feet, *i. e.*, when it attempts to raise itself on its knees, or to climb up the legs of the table. The

placing of the child prematurely on its feet (especially if the body and head be disproportionately large and heavy) will be the cause of rickets and curvature of the long bones of the legs.

If the nursery is exposed much to the light, it is of consequence to change the position of the bed or cot occasionally. A vivid glare of light will always draw the eyes of children towards it: the direction of the bed, relatively to the window, should, therefore, be changed, that the child may not incur the risk of squinting, from the habitual revolving of the eyes towards one point.

EXERCISE.

Infants may, at the end of the second week, be taken into the external air, if they are healthy and the weather prove favourable; and this exercise may be repeated daily on each second day. They should be kept in the horizontal position, on a *flat* wicker tray (furnished with a pillow and thin clothes), to prevent distortion of the spine, angular breasts, &c. If they are set upright, the head should be kept nearly *fixed*, as the slender and unaccustomed ligaments of the child's neck allow the head to roll or drop, which, by pressure and twisting of the spinal marrow, may easily induce paralysis. This caution is especially essential in respect to emaciated or weakly children—jerking

or violent tossing, as I have before stated, being often followed by inflammation of the membranes of the brain, and consequent effusion of water.

The child should be, during its exercise, free from all *tight* bandages or swathes; otherwise, notwithstanding its envelope, the circulation of the blood will be impeded, and chilliness, with its evil consequences, will be likely to ensue. The tenderness and facility displayed by some nurse-maids in handling infants much exceeds that of others. To compensate for a want of this tact, many nurses will grasp the child with a firmness which is painful to them; indeed, fracture of the soft bones has frequently resulted from it, and, if long continued, it will even produce (when the hands *forcibly* grasp the chest) permanent indentation of the ribs. When the child appears anxious to elevate itself from the ground, and *not till then*, it may be encouraged and assisted to walk. This effort is a proof that the bones are in the progress of acquiring that firmness which fits them for this exercise, and the muscles attaining the power of binding closely and moving the bones. It is extremely injudicious to use *irregular* pressure in affording this assistance: the child should be gently held round the waist or chest, the nurse constantly stooping to it. If she does not take this trouble, but holds the child by the arms

at length, or, as is often done, by *one arm only*, or binds beneath the arms the leading-strings, pulling them forcibly upwards, there is great probability of distorted growth of the chest or of the blade-bones.

No determinate period can be recommended for putting children on their feet; we should be guided rather by the child's actions, which indicate nature's consciousness of her own adequate powers. Nature herself will generally prompt the child to appropriate exertion. If it appears, however, to be influenced by sullen indolence, be sure that there is *some* physical cause for it—debility or pain, which it is essential to discriminate, and of course to relieve. The most superficial observer will distinguish the unwillingness of weakness from the obstinacy of laziness. In the adoption of other modes of exercise for children, much caution should be observed. In affording them carriage exercise, we should lay infants in a horizontal position, and guard against too great swiftness and any sudden jolting. If the child is placed in a small chaise by itself it should be warmly but loosely covered, and the face should not be exposed to wind, sun, or dust, a light gauze or muslin curtain being hung over its face.

Exercise on horseback should not be commenced at too early an age. The pride and ambition of children will often prompt them to undergo fatigue

and pain on the back of a pony ; hence in very young or weakly children, the spine may be *jolted* or heavily pressed on, and readily become distorted. I think the seventh year should be attained ere a child is regularly placed on the saddle.

In regard to *gymnastic sports*, I will recommend more discrimination than has usually been adopted. If it confer amusement or benefit it cannot be erroneous ; but it must never be considered as a task : when it becomes compulsory, or is followed by distress or pain, or extreme lassitude, it must, after a few lessons, be discontinued. Indolence, however, will prompt children to object at first to this exercise, which will be often in a short time overcome. But I would never sanction, in *early* youth, the employment of that powerful exertion which ambition or rivalry will excite. Even if a due preparatory training be adopted, it is not essential that every boy should become an *athleta*. I am certain that this muscular labour has been often most baneful, especially in inducing temporary or even *permanent* disorders about the brain.

If violent exercise be used immediately after a full meal, this danger is increased, as the distension of the stomach often prevents the return of blood from the head, while the exertion tends to drive more than the proper quantity into it : from

these causes it must become overloaded. This is the immediate effect of the error. A more remote consequence is indigestion and flatulence; for as to all parts of the body which are much exercised an increased quantity of blood is sent, this, of course, must diminish the supply elsewhere—the stomach is *stinted* of its due quantity for the process of digestion, which thus remains imperfect and deranged.

When exercise is taken, the body should be allowed *gradually* to cool—a sudden chill from checked perspiration being followed by many evil consequences.

I will not specify the mode of exercise or games to be recommended: it is sufficient to point out, as the most salutary, those actions which moderately exercise the muscles without being attended with the frequent probability of *danger*—among them, *moderate* dancing is salutary, tending to promote freedom of the circulation. The buoyancy of youth will prompt almost every child whose health is good to run and play, a disposition which, to a certain extent, should be encouraged. Children of a sensitive or emulous disposition, however, are often excited to overstrain their powers, an excess which is followed by extreme exhaustion, and sometimes by a state of real fever. But there are also certain little sluggards, who are constantly inactive from mere indolence, without

the excuse of indisposition or disease. These opposites, of course, require a contrasted treatment. I would recommend the recreation of swimming, under appropriate superintendence. Its effect is salutary, and the accomplishment may be the means of preserving human life.

In some children we observe a disposition to occasional sighing without evident indisposition. In such cases I would recommend the practice of brief recitations of interesting passages. Such action tends to promote a freedom of circulation through the lungs, and to relieve the windpipe from mucus, which is sometimes the effect of *slight chronic* disease. The existence of pain, or the production of it *by the reading*, render, of course, this exertion ineligible.

BATHING.

The bath has been resorted to in all climates and by all classes, both as a luxury and a benefit. Among the ancient inhabitants of Greece and Rome, the higher classes seldom sat down to supper without previously entering the bath. The beautiful romances of Arabia and Persia teem with descriptions of the splendour of their baths—temples, indeed, most essential in the preparatory ceremonies of luxury and of devotion.

In the oriental cities of modern times the most

adorned and favourite apartment is the bath, and it is indispensable for the devout Mussulman previous to his offering of homage to the Prophet.

If we reflect on the importance of the skin, it will require little argument to establish the benefit of bathing. If its secretion be checked, it must cease to be an outlet for those superfluities of the body, which it is its natural office to expel. Nothing tends to preserve the healthy action of the skin (by removing secretions, modifying temperature, and strengthening muscular fibre) so much as washing; hence its great importance during the infantile period when direct exercise is impossible.

As the sowing of plants, indigenous to warm climates, in colder regions gradually enures them to bear exposure, so, in many instances, will it be with regard to the cold ablution of infants, in rendering them robust. The American Indians (and Virgil alludes to the same custom of ancient Italy) wash their young infants in cold streams as soon as born; and in the Laureate's 'Tale of Paraguay' a beautiful picture is presented of the submersion of both mother and child almost immediately after birth.

But in alluding to the importance of ablution, we must offer our remarks on cold bathing with caution and with certain provisos, as, by submitting a weakly child to this direct repellant, we

may induce dangerous internal congestions, promoting rather than obviating disease. These effects depend on a naturally relaxed condition of the blood-vessels—a failure in the production of that state termed *reaction*—a healthy return of blood, or even an increased quantity to the skin, from which the cold had repelled it.

In appreciating the employment of cold bathing, it is essential that we should notice the state of the child after it has been plunged into cold water. If it appears lively, and if there is a diffused *redness* and *warmth* breaking forth over the body as it is rubbed dry, then undoubtedly the bath has been beneficial, and a repetition is indicated. But if, on the contrary, there is a *chilliness* and *pallor* over the skin—if there is an absence of lively action—if the countenance is anxious—the limbs rigid and benumbed: and should these symptoms, moreover, continue after the child is dry and dressed, then will it be highly dangerous to resort again to cold bathing. Its result will be internal congestion of the large veins, with all the secondary effects of convulsion, of acute inflammation, of glandular obstruction, of wasting, and of diseases of the skin. Thus is the cold bath a bane or antidote, as ignorance or judgment directs its employment.

In those infantile constitutions, then, where the powers of life are evidently not adequate to the

production of *reaction*, the *tepid* bath is the more salutary. Its temperature may be varied according to circumstances, ranging between the degrees of 80 and 95, which approaches the usual heat of the body. Where warm water is employed, I would recommend, immediately after birth, a temperature of 82° or 85°. This may be decreased 1° every three or four weeks, until it be so far reduced as to produce at first a slight sensation of chilliness in the child.

It is a vulgar error to suppose that the tepid bath is productive of relaxation; its effect is usually the most animating vigour, and the cleansing of the impure skin is undoubtedly more complete, as the warmth seems to exert some solvent power on the oily secretion with which some skins are imbued.

One most valuable property of warm bathing is that it may be employed during the existence of internal *inflammation*. Its benefit as a fomentation and its cleansing properties are simultaneous.

Perfect cleansing, I may remark, may, in most instances, be effected without the aid of soap, which is often endued with so irritating a property as to become the excitement of many diseases of the skin. The same evil will sometimes result from the employment of milk as an external application, which, as such, should be discarded from the nursery.

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I may here observe that the skin of sucking infants is thickly studded with small glands termed *follicles*, secreting a fatty substance, which is sometimes so much in excess as to cause white elevations on the skin. These so much resemble a parasitical worm when they are very prominent or pressed out of the follicle, as to have obtained the very inelegant name of 'grubs.' They are soon removed, and the health of the skin restored, by slight friction night and morning, with a coarse cloth dipped in warm water, and the administration of gentle laxatives. The slight scaly eruption of the head termed 'dandriff' should be rubbed with soap and water and coarse flannel. The custom of bathing implies, as its consequence, the salutary employment of moderate friction, the effect of which is an immediate increase of circulation in the vessels of the skin, by which internal parts are relieved, and the skin itself rendered healthy. The expression of delight in the child is an indication of its very beneficial tendency.

Twice in a day it may be repeated, independently of bathing, and continued for five minutes at a time, before the fire; but the practice of tickling for the purpose of exciting laughter, or of amusing the child, is baneful. As there is often a very slight line of division between the sensations of pleasure and of pain, so the transition from delight to danger is often very sudden. Children

from this over-excited irritability, may fall suddenly into a convulsive fit, from which it is possible that they may not recover.

MORAL MANAGEMENT.

There is a strict analogy between the physical and moral constitution, the early impressions on mind as well as body being seldom perfectly erased. Traces of them may be found in the disposition and sentiments, as in the constitution of the adult, so true is it that 'the child is father of the man!'

On the earliest dawn of intelligence, on the first glimpse of something beyond mere instinctive propensity, moral management should commence. Infantile errors will thus be prevented, which it might subsequently be painful and most difficult to correct, because, in a being so slightly rational, argument is nugatory. The wishes and actions of infants spring from mere sensation or from association of ideas—the discrimination between right and wrong arising from the association of indulgence or correction: therefore, if an evil habit or action be passed over with indulgence, an infant will repeat it of course when agreeable, both from simple sensation and the association of it with the approval of its nurse.

On the same principle of association, it is not dif-

ficult to ensure regular and healthy habits, except when pain or indisposition continue. The position of the body and the tone of voice will influence a child to that with which it has been accustomed to associate such position and tone. To ensure this beneficial effect, chastisement and reward must be distributed on *principle*, and not according to the caprice of the nurse, as her wayward humour may suit. *Judgment*, and not the feeling of the moment, must influence the mind ; otherwise, in our happy moods, we may omit to correct a serious fault—and in those of irritation, may visit with severe punishment the slightest error of the child. Most children have intuition sufficient to understand these failings—often to the diminution of their nurse's authority, especially after the fourth or fifth month, when by their actions they practise that which their senses had before taught them.

In judicious correction, courage and perseverance are alike requisite: the chain of management must be preserved entire, and the child should never be allowed in this contention to gain one victory. Crying is the defensive weapon of a child, by which it attempts to resist authority. If once this resistance is successful by the yielding of the nurse, she will often find much difficulty in regaining her lost dominion.

Irritation and anger should be crushed in the bud: they are the modes by which the accumulated

excitement of children is relieved. To check this excitement, then, is to avert those passions which, although in the beginning artificial, in the end establish an evil disposition, and lead very frequently to severe disorder.

Undue severity towards children is highly injudicious. They should be ruled by *love*, and not by fear. They should be made to feel happy, and confident that such happiness is the wish and aim of their nurses. If harshness and severity be adopted, the child will become morose, reserved, *deceptive*; its health will suffer in consequence of fretting and its sympathy with the stomach, which is the grand spring of nutrition, and of health.

Of this, the opposite, though equally detrimental error is false indulgence. Parents will not *reflect* on this important subject, or they might learn how much of the accumulated misery of after-life may be traced to this *selfish* mistake—for so it is, whatever argument on *parental feeling* may be adduced to consecrate the error.

The unnatural mother who *deserts* her child must, we should say, be influenced by the dark spirit of a demon. Alas! protection is more easily obtained for the foundling against the tempest's wrath, than against those evil passions which false indulgence engenders in the *pet*, and which, in future life, expose their victim to the pangs of disappointment—to the scorn and malice.

of a world, the *hard-heartedness* of which presents a fearful contrast to the soft indulgences of the fireside at home. But I am not writing a moral essay, and will not presume to follow up the picture through the errors and delinquencies of youth to the distresses of age—perhaps to some melancholy catastrophe, the ultimate penalty of early errors.

Forcible impressions on the senses, whether sudden or continued, are peculiarly pernicious. All *extremes* should be avoided, as violent laughter, brilliant lights, &c., and even powerful odours, which in some instances will cause complete *fainting*.

The effect of sudden fright, from wantonness or severe threat, is sometimes convulsion and death; or the impression will be permanent, so that an epileptic fit may be long afterwards produced by some excitement resembling a *former* fright—the result of powerful memory and association of ideas.

Certain *antipathies*, even, may produce effects equally destructive. Such antipathies, once ascertained, should not be disregarded, with the vain hope of overcoming a capricious prejudice. Equally erroneous is the reverse of this—the exciting of an *unjust* prejudice. The frequent objects of this caprice are the physician and the tutor, whom the nurse pictures to the child as the very scarecrows of society. The physic of the one and the

lessons of the other are held up as the constant penalties of infantile delinquency: it must follow that, through this unjust mistake, they are feared and hated.

Children are readily susceptible of feelings of *jealousy*. Let there be, therefore, no marked *preference* bestowed. Such error is the common source of envy and hatred, which change the chamber of domestic love into the arena of domestic warfare.

The management of the *germ* of the infantile mind, the regulation of study, requires much discrimination. It is a duty, in the estimation of wisdom, so important, that even a Cato and an Augustus did not think it derogatory to the fame of their heroic achievements. The effect of *premature* study too often illustrates the observation of Rousseau, that 'reading is the bane of infancy.' The constant effort of the tender brain, during the modelling of these sucking sages, by which an excess of blood is driven to it, often produces wasting of the body, inflammation, and water in the head.

In the regulation of study, the peculiarity of character and disposition, the extent of capacity, must be measured. The drone and the busy bee require a *varied* management. In all cases, we should endeavour to strew flowers over the thorny path of study, rendering it rather an amusement

than a task. Long patience and gentle perseverance in the instructor will often be essential. Although a dull child will sometimes, by a *sudden* development of intellect, become a brilliant youth, in other cases the energy of mind will be *progressively* elicited by constant and patient culture of its soil, as the rustic wild bloom, *by degrees*, expands into the luxuriant garden flower.

But let me repeat the caution against the system of *forcing*. Precocity of intellect is too often productive of premature decay; and children who have thus been driven to *anticipate life* linger through an enfeebled and melancholy existence, or sink beneath the blight of an early winter.

Children should live and be treated *as children*; but the foolish pride of the mother, and the flattery of hypocritical *friends*, thwart this precept. How often is she thus tempted to drag her baby from its nursery into the drawing-room amid the din of discord and the vivid glare of chandeliers—there to have its brain tortured by intense light and incessant questions and painful attention when the little martyr should be asleep in its nursery!

The *knitting of the brows*, the gloomy and thoughtful expression of children when thus tormented, prove the painful exertion, and ought to warn us of the ultimate mischief of these unwise modes of excitement.

In early infancy, grammatical accuracy in the

nurse's language is of no importance: the infant, like the lower animals, is influenced merely by the tone and accent, which, if soft and lively, may serve to amuse and pacify during the processes of washing and dressing; but as the child grows older, and begins to understand articulate sounds, it is of more consequence. Yet this propriety of language is constantly disregarded by the nurse, and, instead of appropriate phraseology, the most absurd epithets and nonsense are substituted, which may in a great degree model the future language of the child, and lay the foundation of those verbal peculiarities which, in after-life, may call forth ridicule, and perhaps prevent advancement.

CONSTITUTION OF INFANTS.

In the early period of life, especially after the commencement of dentition, and, above all, where the sensibility is evinced by the frequent excitement of laughter and tears, there exists what is termed *predisposition* to disorder in a very high degree—the result of that excessive irritability of the nervous system, which causes the majority of infantile diseases to bear an inflammatory character. Happily, as there is this susceptibility to disorder, so is the early and scientific treatment of infantile disease satisfactory and successful.

The *rallying* power of the system is very efficient in childhood; the healthy body is in a constant state of renovation and increase, and the constitutional energy itself will often seem to effect a miracle of *reanimation*. Children have been *laid out*, cold, rigid, and even livid, and yet have suddenly, and without artificial effort, breathed, and eventually recovered. On the mere removal of the exciting cause of infantile disease, a condition of health will be often almost instantaneously produced.

The constitution of most children is *usually simple*—that is, uninfluenced by the changes of structure produced by repeated or varied disease, and not modified by alarm regarding the result of their disorder, or by mental exertion or disquietude. Hence there is a greater *uniformity* in the symptoms of children than in those of the adult.

Corresponding with the extreme excitability of the infant, we notice the celerity both of the pulse and of the breathing; the infant pulse beating about one hundred or more strokes, and the breathing being thirty-five times in the minute; while, in the adult, the pulse is seventy-five, and the breathing eighteen or twenty within the same space.

In infancy, disease is the consequence of those external causes with which, from the moment of its birth, the infant comes in contact, as the vicissi-

tudes of temperature and atmosphere, or the administration of improper diet, or the influence of hereditary taint or constitution. We ought, therefore, to attend to those precepts which shall protect the infant from the exposure to the first, or correct the destructive or debilitating influence of the latter. To prevent, indeed, the *onset* of disease. Susceptible as infants are, the slightest errors should be avoided. We cannot estimate too highly the value of judicious preventive treatment in controlling the predisposition to disease. As a prominent illustration, history informs us that Henry IV. of France escaped the constant recurrence of convulsion, which marked the rest of his family, by his removal from the confined air of a city to a rustic cottage. Of parallel instances, I could recite many were it essential.

These may be considered the *common* causes of infantile disease: but those *specific* causes which occur usually once in life, in every system, may attack the infant at the very hour of its birth;—such are the contagious fevers—measles, scarlatina, small-pox, chicken-pock, and also hooping-cough.

Exposure to cold and wet often induces disease, and prevents the full development of the body. The common disease produced by this cause is *catarrh*, or *cold*, which often terminates in the acute diseases of infancy, inflammation of the lungs, &c., croup, and even hooping-cough, which is

usually most severe when so ushered in. The acute attacks, if not checked very early, generally disorganise or change the structure of some important organs of the body—forming thus, what is termed a *weak* or delicate *point*, which often becomes the seat of acute disease in after life, or of some chronic or permanent disorder which entails a debilitated and often useless existence. The effect of constant cold or sudden vicissitude, in stunting the growth, is forcibly proved on a large scale, by the low stature of many Scotch Highlanders, the dwarfish form of the Laplanders, and perhaps by the slender debilitated frames of the Cretins of the Vallais in Switzerland, whose very low degree of bodily power can scarcely be called life, and whose deficient intellect, also, scarcely raises them above the state of idiocy.

When the stomach has first imposed on it the duty of extracting from the food the nourishment of the body, it cannot always undergo these new actions with impunity. Even the maternal milk itself, the legitimate nutritious fluid of the infant, from various causes, may prove a fertile source of mischief; and the excessive quantity of fluids which may be formed in the intestines, may, by their accumulation, become the cause of disease. The results are,—nausea, flatulence, relaxation, and remittent fever; often tumid belly, wasting, dropsy, and water in the head. Under this in-

fluence, too, other casual disorders, and also the symptoms or effects of the process of dentition, otherwise comparatively slight, become additionally severe, and often fatal: the disorder in the bowels so affecting the constitution, as to become itself a predisposing cause to disease. Under this state, deficient nourishment arises; a due supply is not afforded for the building up of the body; and hence are produced rickets, distortions, glandular swellings, and other forms of scrofula.

DENTITION.

The process of teething, although, under certain circumstances, a very constant excitement of disorder, yet, where the system of the infant is properly regulated, may be considered comparatively safe and simple. It is true, that, during this period, the condition of the vessels about the head is more active than before, evincing this excitement, either by transient flushes or by a more constant increase of heat and fulness; but even this circumstance does not materially aggravate the danger, if the child be kept cool, and the state of the stomach and bowels attended to; their healthy condition will enable the effort of nature to ward off the evils otherwise contingent to this essential process.

The phenomena of dentition are usually marked

by uniformity; occasionally, however, there is a variation as regards the cutting of the teeth. The fifteenth, and even the eighteenth month have been known to elapse ere one tooth has appeared; and, on the contrary, teeth have passed through the gum before the birth of the child, as in the historical instance of Louis XIV., &c. The most usual course of dentition is this: the first set—the twenty deciduous or milk teeth, are nearly formed in the socket at the period of birth; beneath them the pulps of some of the permanent teeth are also formed. Between the sixth and eighth months subsequent to birth, distension of the gum is caused by the rising of a tooth, which is usually an *incisor* or front tooth of the lower jaw. After the cutting of two lower incisors, those corresponding to them in the upper jaw appear. Previous to the completion of the first year, the whole of the incisors have appeared; frequently, however, at very irregular intervals; and in some cases one or two of the grinding teeth may appear before them, which is marked by some increased severity of symptom. On the completion of the year, we commonly observe twelve of the milk teeth, *i. e.*, eight incisors and four *grinders*. At very irregular periods within the second year, the four pointed, *canine*, or eye teeth appear; and subsequently the four other grinders; thus completing the number of the first set.

About the seventh year the milk teeth decay (the fang being usually more or less absorbed), fall out, or require removal, to afford a space for the growth of the *permanent* or adult set. If, however, the fang be not absorbed, the milk tooth may not become loose, and the attention not being directed to it, it may become a resistance to the proper growth of its successor, which may thus be warped from its direct course, and if the milk-tooth remain fixed, may form a complete double row. Between the ninth and tenth years, the incisors and pointed teeth have appeared; the smaller grinders ere the twelfth year is completed. Between the twelfth and twentieth years the two larger grinders appear, and the *wisdom-tooth* about the twenty-eighth or thirtieth year—completing the number of thirty or thirty-two. The milk teeth are thus less in number and smaller than the permanent; the jaw being proportionably developed for the second growth. Still, there is often such disparity between the jaw and the teeth, that irregularity, and often actual deformity, may be the result. This evil can in no other way be remedied, but by removing one or more of the permanent teeth proportionably to the deficiency of space. The term ‘cutting’ is not a proper one; the tooth divides the gum by pressure, which occasions *absorption*, and not by incision.

The care of the teeth is of great importance; it

will prevent premature decay. The gums should not be rubbed hard and irritated ; fluids should not be swallowed too warm, nor sugar, especially brown, allowed to remain about the teeth ; it contains an acid most corrosive of the enamel and the fang. The child should not be permitted to crack nuts, &c. with its teeth ; they will shake the tooth in its socket, and accelerate decay. It is well to wash the mouth with tepid water morning and evening, and after each meal.

Milk-teething, a comparatively safe process in healthy and well-treated children, becomes, under other conditions, dangerous ; it forms both a predisposing cause—rendering the system susceptible of the attack of prevalent or epidemic fevers—and an excitement of many acutely inflammatory and chronic disorders, and of diseases of the skin. The mortality resulting from the immediate or remote influence of the first dentition, I think may be computed at one in twelve.

The judicious management of dentition is the preventive of a great majority of infantile disorders.

In addition to general attention to the bowels, our chief local remedy is *incision* of the gum. This should be always adopted if the gum is swollen, red, hot, and painful ; and it is often followed by almost instantaneous relief to the child, and of many acute symptoms. The

lancet should be carried down to the crown of the tooth, and a *crucial* incision should be made, that closing of the gum may not immediately or prematurely take place. This incision may be repeated if necessary. The notion of the line of adhesion of the divided gum becoming hardened and less yielding to the tooth is a foolish error. This line is, indeed, the very first point which does yield to the cutting tooth. As the pulp or soft tooth becomes hard, and the crown begins to be *ossified*, the soft membrane which invests the tooth is distended by pressure, even while the tooth is deep in the socket, while the child is *breeding* the teeth. This distension is as painful as that of the gum itself; hence the necessity of dividing both the membrane and the gum by the lancet. The acute symptoms arising from dentition are not produced from this excitement only; there is a disposition in certain structures to be acted on by its irritation;—for instance, inflammation of the membranes of the lungs, the bowels, or the brain, will occur, as those parts may be more prone to disease than others. To explain this, I would say, that general excitement or fever of a mild form is always produced by teething: under healthy or favourable states, this continues mild, and eventually subsides; but if the child be unhealthy, this fever will increase, assume the *re-mitting* form, and will fix on some delicate organs,

and will become local inflammation, which will require immediate and active treatment.

The most frequent of these disorders are, inflammation of the membranes of the brain, or excessive fulness of its veins, terminating, if not controlled, in hydrocephalus or the effusion of water. In all these inflammatory disorders, and in the simple congestion without fever, which we sometimes observe in the vessels of the brain, the nurse should adhere to simplicity and moderation regarding food; the warm bath should invariably be used; the head being kept cool, and the lower limbs warm.

Convulsion is a common occurrence in difficult dentition: it is, however, but a *symptom*, and cannot be cured but by removing the cause.

Some infants are teased with occasional cough during dentition. If severe, the mixture ^(xi.) may be given; but still, if *quick breathing* and expression of *pain* exist, more attention is required. Others will be afflicted by various degrees of *paralysis*, or loss of power and coldness of the lower limbs—a condition which nurses whimsically term the ‘cutting of teeth in the loins.’ A very common attendant on dentition also is *diarrhœa*, or flux of the bowels: this relaxation, if only moderate, I should seldom be disposed to check; it is one of the modes which Nature adopts to deplete the system, and, like the drivelling, tends to

ward off diseases of far greater moment. If it becomes profuse, this diarrhœa must be treated by alteratives ^(v.) rather than astringents, or *mitigated* rather than stopped; for, if it be an evil, it is, *within certain limits*, but an evil on the safe side. It is highly injudicious to treat this disorder by the *free* use of opiates, which many empirical preparations contain: these injure by a direct influence on the brain, in inducing stupor, and indirectly, by *totally* suppressing that discharge which was, within limits, a natural effort to relieve.

Equally erroneous is it to administer full doses of anodynes for the purpose of lulling to sleep. I have known this artificial slumber terminate in the sleep of death. I do not so decidedly object to the rubbing of the gum with one drop of the soothing syrup: if this be not swallowed, it will sometimes be beneficial.

A coral is not the substance most proper for an infant's gums to press on. I prefer a *flat* ivory ring, of sufficient diameter to prevent its being entirely pushed into the mouth.

ON THE EXTERNAL SIGNS OF DISORDER.

The florist will carefully dislodge the *larvæ* or eggs of the canker-worm, to preserve untainted the beauty of his blossom; is it not the more sacred duty of the nurse to watch the earliest development of the seeds of infantile disease? It is to this period that my efforts are most anxiously directed. There is a point (if our vision or our wisdom were sufficiently acute to discern or comprehend) at which the vitality of this 'worm i'the bud' might be destroyed, and that very great relative mortality be lessened which occurs in children before the termination of the second year. This important moment is almost always concealed from *us*—the symptoms of commencing disorder being usually so slight or so obscure. But even when the indisposition is formed, it is too often disregarded by those who are the only witnesses of this unfavourable change; not so much, perhaps, from indifference, (for the chief spring of maternal anguish is the anticipation or contemplation of the ravages of disease,) as from a want of that discrimination which it is so difficult to attain. Hence that procrastination of remedy which becomes, equally with officious ignorance, highly detrimental,—too often destructive.

In the study of the internal diseases of children,

we must adopt other modes of investigation than those which relate to the maladies of the adult—who is capable of expressing sensations by *articulate* words: expressions, which, from the imperfection of language, or our desire to adopt figurative terms, are not always so decisive and illustrative as we have thought. The instinctive expression of complaint during pain, the expression of feature, and the attitude and action of the limbs, will be, if skilfully interpreted, far less fallible guides: they are the expressions of nature herself,—the modes of instinct which can never impart erroneous ideas, were not our comprehension deficient in the power of correct interpretation.

As the infant cannot understand those sounds which are the mere figures of *artificial* language, much less can it utter any but *natural* expressions of its own sensations. These, however, are uttered immediately that feeling excites them, while older children are often deceptive—employing the *negative* and *affirmative*, yes and no, falsely or indiscriminately.

To attain any degree of proficiency in this study, patient attention is requisite. How often do we hear the unskilled or unreflecting nurse express delight at those contortions of the lips, which she denominates laughing! This is often a real spasmodic action, and may be witnessed during the

severity of the convulsive fit. This fallacious smile has too often lulled, with false hope, the anxious mind of the mother, who cannot discriminate between the insidious expression, and that true indication of health, which has been so beautifully painted by Catullus—‘The infant, from its mother’s bosom, stretching forth its tender hands, smiles sweetly on its father with *half-opening* lip.’ But even the most experienced in this study will be sometimes fallible, and must ever be so, unless we may hope to attain that acuteness of intellect which conferred on the vizier of Sultan Mahmoud a power of interpreting the language of the birds.

In writing on the external expressions of disorder, I am most anxious to avoid the excitement of unnecessary alarm. Many—most, perhaps, of the expressions which I have enumerated have occasionally existed without a dangerous result—the power of Nature effecting her own restoration ; but, reduced to the dilemma of uncertainty, it will be the safest and wisest to err on the side of caution, and aim at the prevention of disorder.

If I seem to have drawn a formidable catalogue of symptoms, it arises from a wish to comprehend, briefly, the whole of those signs of disorder which, as they are common, are, therefore, liable to be disregarded ; but the knowledge of which cannot be deemed trifling when we reflect, that as, with-

out the consciousness of error, no moral reformation can be effected, so, without that painful knowledge—the anticipation of disorder—we can adopt no precept for the averting of the danger. I have endeavoured, therefore, to direct the attention to some of those appearances or actions which are the usual premonitory signs or indications of infantile disorder,—to afford a warning of the approach or attack of the enemy,—a beacon-light to the mother or the nurse who is, or ought to be, constantly watching, like the faithful sentinel, over her sacred trust.

EXPRESSION OF FEATURE.

As the features have been termed, physiognomically, the index of the mind, so may they be considered, physically, the earliest and most decisive index of unhealthy changes in the body. Their expression is usually the first circumstance which directs the nurse's attention to her child. She may hence form a correct prognostic, when the experienced practitioner may fail in detecting disease. Expression is to her,—

'Le cri des organes qui souffrent.'

It is this expression of feature which, both in pleasure and in pain, so peculiarly distinguishes

the human countenance,—which stamps so deep a contrast between the smile of a beautiful infant, beaming with health and purity, or of

‘ A child at play,
Among the rosy wild flowers singing,
As rosy and as wild as they,—

and the intense cast of thought impressed on the adult features by the mingled feelings and conflicting passions of busy life.

The expression of the eye is often so eloquent as to have been termed its language, and to have explained

‘ What words can never speak so well.’

Although, during three or four days after birth, distinct or *observing* vision is not enjoyed by the infant, yet it is the first and most conspicuous monitor to the mother. It is on the eyes of her child that she gazes when she prattles to it for amusement, or lulls it to repose—it is their unusual sparkling or their dulness which often first excites her anxiety.

The pupil of the eye of an infant is, in a state of health, usually much dilated, owing to the quantity of the dark *pigment* at the bottom of the eye, which absorbs superfluous rays of light—thus subduing their brilliant effect on the brain; its *alterations* of size are, however, very *frequent*. It is this variation, according to the degree of

light to which it is exposed, which usually indicates a condition of health—at least, so far as the function of the brain is concerned. The *permanent* dilatation or contraction, however, is a condition of more importance. The *fixed* dilatation of the pupil, if it be accompanied by a livid hue and flaccid condition of the face, is often the indication of some effusion of water on the brain.

In the progress of whooping-cough, it is of consequence that the appearances of the eye should be attentively regarded. While the disease is confined to the organs of breathing, the eye will be little influenced, except in the redness subsequent to a paroxysm of cough; but we may usually decide if the brain is about to participate in the disease simply according to the *fixed* contraction or dilatation of the pupil.

Squinting, suddenly taking place in connexion with other symptoms, is an indication of danger; but it may also form one among the signs of mere irritation, from some remote cause which we term sympathy—such as worms, or other disorders of the bowels, and the proper direction of the eye is often restored by a laxative.

Contraction of the pupil to a minute point, with the eye half closed accompanied by frowning,—a tumultuous movement of the eye-ball,—a red streaked condition of the white of the eye,—this combination unequivocally marks that condition

which will speedily become inflammation of the membranes of the brain ; yet even these warnings we have often seen disregarded. It is, indeed, the first stage of acute hydrocephalus, and must be watched with some anxiety ; but as it is an early stage, it is often easily removed by laxatives and leeches, healthy breast-milk and *diluent* fluids, and by keeping the head cool, and the feet warm.

When the eye-ball is fixed and drawn up under the lid, the pupil *rapidly* dilating and contracting, the eye being bright and glassy, we may anticipate, *if not averted*, the occurrence of internal convulsion—infantile epilepsy.

If, on exposure to light, the *same* visible effect is not produced in *both* eyes,—if, in one, there shall be contractions,—in the other, a fixed state of pupil, I should consider it a dangerous symptom.

All these are, indeed, the more marked signs of disorder of the head, and are attended with more or less fever ; yet they are often preceded by a state of mere peevishness and restlessness, with heat of skin, some turgescence of the veins, and a fallacious smile. In this case, a warm hip-bath, with the application of ether and water to the head, and a laxative, will often avert the threatened danger.

Any peculiar movement about the nose and lips should prompt us to an attentive examination of the parts about the chest.

The nose will be drawn in during respiration, if there be any impediment to the transmission of air through the lungs in the act of breathing; while the mouth will be unusually open, the lips being puckered and of a livid hue; in other cases the nostrils will be expanded. When the nose or upper lip are tumefied or discoloured, it is an almost invariable sign of irritation in the bowels, worms being the most frequent excitement. Accompanying this, we shall usually see the face pale or livid, and the lower edge of the eyelid of a leaden colour.

If the inside of the nose be deficient in moisture, and the lips pale and cracked, our attention must, at the same time, be directed to the head—these signs being often indicative of commencing disease.

Whenever the brain is menaced with disease, I would anxiously inculcate the necessity of keeping the head cool; yet it is very common to cover a child's head with a heavy hat or cap, which may almost, by its weight, cause the head to *droop*, and excites the circulation of blood and the temperature of the head.

EXPRESSION OR MOVEMENT OF THE LIMBS.

The high perfection of her art teaches the opera dancer (if I may draw this analogy) to express even thought and sentiment by the variety of her evolutions; this may be termed the *artificial* language of the limbs. The infant will express its pleasing or painful sensations by their peculiar movements, which, to the eye of attention, will speak their *natural* language.

Children, in a state of health, however, seldom employ any exclusive action of the limbs; they will exert their moving powers *indiscriminately*—they will spring, roll the arms, kick, crawl, in all the variety of antic display.

In considering the movements of the limbs and body as a series of symptoms, we must not essentially determine that part to be the seat of disorder in which any violent or unusual action is observed; it may be excited by remote disease, through the medium of sympathy. If any one peculiar movement be suddenly or often observed in children, immediate attention should be paid to it; it should not, as is often the case, form a subject for admiration or laughter, although I will not affirm that it is invariably a mark of disorder. The child naturally resorts to unusual movements to relieve the stretching and pain of inflamed parts. Thus

the legs are *forcibly* and *constantly* drawn up towards the belly when inflammatory disease exists about the lower bowels or their membranes. If, however, it appears generally uneasy, but keeps any one limb unusually quiet, or moves it by sudden jerks, it is probable that such limb is the *seat* of pain.

There are two conditions of the limbs and body which indicate disorder—1. An excess of action, spasm, or convulsion : 2. A loss of power,—paralysis. They are essentially depending on peculiar irritation of the nervous system, excited by a variety of causes. The most simple form of *spasm* is starting in sleep : indeed, from the hour of birth, this starting and twitching very strongly indicate the easily excitable state of the nervous system in the infant. The habit of bearing impressions with impunity is yet to be acquired by custom.

As early as the fifth or sixth day, infants will sometimes be attacked by spasms in the muscles of the lower jaw or of the face, and even of the neck—in very rare instances extending to those of the whole body. In most severe cases we have seen the jaw completely fixed.

It has been thought that a peculiar state of the air—an epidemic influence, is the cause of this : I believe it to arise from a more common source—a neglect in the evacuation of the dark secretion of

the bowels. I have sometimes believed, too, that the irritation arising from an *undue* ulceration of the navel-cord has been its cause.

Flatulence or acidity in the bowels will sometimes be the source of slight convulsion.

Teething is a very common cause.

Another cause may be the effort of nature to throw out an eruptive disease on the skin, especially in the cases of measles and scarlatina. At such a period we may often observe the legs rigidly extended during sleep; and when the eruption *has* appeared, convulsion, although it may previously have been frequent or most severe, will often altogether cease. If, during any form of convulsion, swelling of the hands or feet should occur, we shall usually prove that *painful* dentition is the cause.

A contraction of the thumbs and fingers and toes is the usual premonitory sign of more severe convulsion. When this is rigid and frequent, it indicates a tendency to disorder in the head.

If it be combined with a curvature of the body backwards, I have sometimes seen it followed by that disorder which has been termed *chronic croup*, which is a *spasm* of the windpipe, assuming all the acute character of genuine croup, but totally differing from it in its nature and its cause.

Paralysis or loss of power is the reverse of

spasm, and is the most frequent in children of a lax and feeble frame.

It is usually accompanied by wasting and coldness of the limb which is its seat—the skin hanging in folds—which is often so slightly regarded, that nurses will sometimes unconcernedly express surprise at being able to *wrap the skin round the arm*.

Slight and partial paralysis often takes place during dentition, without general disorder. This need not excite alarm, if unattended by fever, as it will be relieved on the completion of the process. Irritation or disorder in the bowels will also often cause it. It will sometimes also occur at the decline of a protracted or depressing fever—a state which requires the benefit of pure air and sea-bathing.

When both the lower extremities, or one half of the body is paralytic, the case is depending usually on latent or more important causes. The brain or the spinal marrow may probably be the source.

Among the most prominent examples as *signs* of disorder, I may briefly enumerate the following: the touching of the nose and the grinding of the teeth, as indications of worms; the constant motion of the fingers to the mouth during dentition, or to the head in disorders of that part (for children seldom raise their hands so high, when in a state of health); and the tossing of the hands and

picking of the bed-clothes in the latter stages of severe fever.

In older children, an uplifted step, as if they were walking up hill, with a staggering gait and a rocking of the legs, indicate some affection of the head—often the first stage of that species of hydrocephalus which may occur without *acute* inflammation. In the more advanced stages of this disease, the legs are usually completely stretched out when the child is lying in bed.

These circumstances are proofs of there being a certain *cause* for these unusual actions in an infant in whom reason has implanted no *voluntary* power of expression or imitation.

EXPRESSION OR LANGUAGE OF COMPLAINT DURING PAIN.

This is a subject of most interesting nature, and as it is, with reference to the infant, a purely instinctive expression, one of great difficulty of comprehension. The mother is, on this point, perhaps, the most successful student, being guided both by experience and by the powerful influence of natural attachment. Maternal sensibility renders her constantly alive to the most trifling or subdued expression. To the *young and inexperienced* mother, however, my observations will, I hope, prove of some utility.

The genuine language of complaint is *inarticulate*. It does not consist in words, scarcely in syllables, but in *simple sounds*.

This expression of complaint may be *voluntary*, consisting in a natural effort to relieve—or *involuntary*, the utterance of sounds which depend on some mechanical or diseased change in those structures which produce the voice: such are the whistling of croup, &c.

The real expressions of complaint in infants may be thus arranged, according with the degree of suffering which calls them forth, or the intensity of the disease itself:—

CRYING—FRETTING—SCREAMING—MOANING.

Weeping being an expression of pure *mental* sensibility, of sympathy, or of grief.

Crying, although sometimes an indication of real pain, is often an involuntary mode of relief, and, when in a moderate degree, may not require correction or soothing: the plans *usually* adopted for the latter purpose, full feeding and violent rocking, being both highly injudicious.

The first natural effort of the infant is the act of crying. It seems irritated and uneasy until the convulsive feeling is removed, and the act of breathing is established.

The inspiration necessary to the act of crying is

a deep sigh, accompanied by a full expansion of the chest. The air-cells of the lungs are distended by the rushing of air down the windpipe, and a free circulation of blood through them takes place—an action absolutely essential to health, and which is produced in the adult by moderate laughter, and the increased respiration during gentle exercise. The effect (on the lungs) of sorrow or abstract study is *suppressed* breathing, and, on the same principle, it is relieved by an occasional deep *sigh*.

In the want of locomotive exercise, a repetition of deep breathing will be very efficient in obviating the usual effects of sedentary occupations; and crying is an essential mode of exercise for the infant, who is thus relieved, in the want of that salutary exercise enjoyed by an older child. In the system of the child, an excited condition often occurs, which is arising from an *accumulated irritability*,—a condition, I believe, somewhat analogous to the charging of an electric jar. For the dissipation of such irritability crying is useful; for, as in the adult the suppression of grief and tears is often deleterious, and indeed sometimes fatal—so, in the infant, congestions and convulsive actions would more frequently occur were it not for this mode of relief by crying.

Fretting.—An infant will never fret unless it be uneasy, but this uneasiness may be the character of peculiar infantile irritability, and not

essentially constitute pain. It may be the mere sensation of fatigue, a condition which nature relieves by sleep ; therefore is the sleep of children so frequently preceded by fretting. In slight fretting, where no material pain is felt, the sight of any interesting object—a kitten—will cause the child to smile and suspend for a time its fretting.

At other times this uneasiness will arise from mere mechanical irritants, as a tight bandage, the pricking of a pin, &c. These causes should be carefully ascertained. Medicines have been administered (in vain, of course) during those expressions of pain, for the relief of disease, when investigation has proved some such irritating cause to be the source of the evil. Fretfulness *continued* should not be disregarded, as this feeling of uneasiness is sometimes the commencement of disorder. It is on this account cruel to correct a child for an occasional propensity to fret, and it is an equal error to attempt to subdue it by the common custom of hard rocking or concussion ; quiet, or stillness, being by such a mode only gained by inducing a species of *stupor* which might terminate in convulsion.

The irritability of children is easily excited by the influence of injudicious feeding. Of this derangement fretting is the peculiar sign. In such a case, especially, is the custom of rocking most baneful, as, contrary to unscientific opinion, the

process of digestion is materially *impeded* by this *concussion*. The intended remedy becomes a main cause of aggravation, often accelerating the *consequences* of errors in diet, such as wasting, remitting fever, &c.

Mere fretfulness may not excite alarm, as it is only a mark of *commencing* disorder—there is *time* for the employment of remedies; but I am inclined to regard with more anxiety, fretfulness combined with a frequent disposition to doze, or a short sleep, especially when the child starts suddenly on the slightest motion or noise. Disorder of the brain is often the consequence of neglect of these symptoms.

The character of these disorders is that of sudden changes. Children will often become suddenly silent in the midst of a whining cry; and if they have begun to articulate, the answer which they make to a question if anything hurts them, will be, in an *indifferent tone*, 'No,' or 'Yes,' an answer dictated, not by feeling, but by peevishness. When this occurs, there will be found, usually, some fulness of the blood-vessels of the head, which simple remedies and care will easily remove.

Screaming, as it is usually considered, may be but a violent degree of crying, the expression of terror or alarm. The face is flushed, the veins become turgid, as the effort causes an impediment to the return of blood from the head.

But it is sometimes *protracted*, and becomes extremely shrill and piercing, the heat of skin being increased, and the child evincing other marks of indisposition. These are signs of disorder, and should be relieved. In the *active* stage of inflammation, before the depressing influence of the disease, the child will frequently utter a shrill scream. In the inflammation of the gum during teething, and in many other inflammatory affections, the scream will be protracted more or less, but in inflammation of the chest and belly, in which are seated the organs of breathing, the effort of screaming, though induced by continued suffering, so much *increases* pain, that the child controls, for some moments, the expression of its suffering—the screaming is *by fits and starts*. Certain *local* symptoms will direct our attention to the *seat* of the pain or disease. Intolerance of light, and tossing of the head if that be the part affected; quick breathing or panting, or cough, in disorder of the lungs, with violent palpitation, if the heart participates; constipation or painful relaxation in affections of the bowels, combined with sickness, in those of the stomach, &c. &c. The whistling scream in croup is so characteristic as not to be mistaken. Sound is in this case modified by a peculiar inflammation of the membrane, and a contraction in the calibre or passage of the windpipe.

Screaming is a violent effort, and indicates vigour and strength in the child; it is, therefore, heard in the early or acute period of disease.

Moaning is the most important and threatening expression of complaint, being that of suffering with *weakness*, and indicating either that extreme depression which renders inflammatory disease so difficult in its treatment, or some oppression of the brain. Children will, however, moan and grind the teeth *at intervals* in slumber during dentition, but these moans are very short, and different from that *continued* moaning at each expiration during acute disease.

When, after violent fits of shrill screaming, the infant is suddenly affected with extreme languor, and stupor somewhat resembling sleep, accompanied by dull moaning, such a state of apparent quietude is the reverse of flattering.

If the speech of an older child is marked by a *nasal* tone—if it leaves sentences half expressed, and draws a deep sigh followed by moaning, it is an evidence, at least, of *tendency* to effusion of water on the brain.

Moaning is peculiarly characteristic of disease about the stomach and bowels. If a child usually lively is heard to moan often, and is observed to draw up the legs, the attention should be immediately directed to the state of the belly.

ON CUTANEOUS DISEASES OF CHILDHOOD.

THE majority of cutaneous diseases are symptomatic of internal disorder, constituting a natural effort to relieve the system of something injurious to the health. So far, and within certain limits, they are salutary. Thus constituting, as it were, natural issues, it will be evident that there is much danger in the merely *external* treatment of such diseases. Happily, such treatment will not often be efficacious in their complete removal, as the cause still exists which excited the skin to this action. The eruption may be considered as a species of perspiration. We observe the rapidity with which inflammation takes place from the prevention or checking of perspiration by exposure to cold, and how successfully this disorder is relieved by reproducing the action and moisture on the skin. So, when constitutional derangement has occurred by the improper use of cosmetics, the reproduction of the eruption is often essential to recovery.

I have seen local application to the crusts of scald head speedily followed by acute inflammation of the eyes, in some instances terminating in their rapid destruction.

Inflammation of the membranes of the brain has often been produced by cold lotions to

erysipelatous affections of the face: paralysis, melancholy, insanity, and death itself, have resulted from similar errors; nay, even the *spontaneous* disappearance of skin disease will be followed by evil consequences, and I may also allude to the extreme danger resulting from the *paling* and flattening of small-pox pustules, and the sudden recession or premature repelling of those rashes which are attended by fever, as scarlet fever, &c. &c. I will not here enumerate the many instances of fatality resulting from this method, but my own experience has convinced me of its very dangerous tendency. The detrimental use of cosmetics is not, of course, so prevalent among children as the *adult* females of elevated rank, but it is not uncommon. It is this error of the nursery which often banishes from the constitution the blessing of rosy health, establishing; in its stead, that excess of languor, that delicate sensibility, which will shrink from the pure breath of heaven, as the sensitive plant from the touch.

When *local* diseases—that is, skin affections, which do not depend on constitutional causes, are removed by merely external applications, serious diseases will sometimes be the result, especially if the eruption shall have existed a long period. The reason of the danger is this: on the establishment of skin disease, some of the

healthy excretions of the body, as perspiration, &c., may be diminished in quantity. On the sudden external cure of the disease, these healthy functions are not so suddenly restored; and hence, in [this interval, the system becomes oppressed, and disease ensues.

But with regard to *symptomatic* diseases of the skin, this caution is especially needed: the salutary effort of the system to relieve itself is impeded, and it exerts its force on other and more important structures. We may recollect that the brain, and many other internal parts are *vital* organs. The skin is not so: its diseases have the effect of preserving more essential parts from disordered changes; and we must readily allow, therefore, the wisdom of abstaining from any interference with the skin disease until we have first directed our attention and our remedies to the constitutional cause which produced it.

It is but just to observe, that I have, in some instances, seen the external disease *react* on the system, producing severe constitutional disorder. Internal and external remedies must then be *simultaneously* employed.

I have said that the majority of infantile skin diseases are symptomatic. Such is the case even with regard to the specific diseases, measles, scarlatina, &c., and even small-pox and chicken-pock. The eruption does not constitute the dis-

ease, but merely forms a symptom. It is the mode adopted to expel from the system the matter formed by contagion. I am decidedly of opinion that children have sunk under the influence of measles, when, as the eruption had never appeared, such an influence was not even suspected. It is of essential importance, then, especially when such epidemic diseases are prevalent, to regard the feverish disorders of children with a suspicion that they partake of this peculiar nature.

The common anxiety of nurses to contribute to the *throwing out* of the eruption is therefore founded on principle, and we may all have witnessed the danger of its premature or sudden disappearance. Cold air must be especially avoided, and the opposite error of raising high the temperature of the apartment must not be adopted; the one may induce inflammation, the other may excite fever.

In those skin diseases which are signs of internal disorder, the constitution of the child is strongly marked by the general character of the disease, especially its *colour*. On the robust or generally healthy child the eruption will usually be of a clear pink or ruddy hue; while on that which is weakly or emaciated it shall assume a dusky, dark or livid tinge. This comparison is an important circumstance, as it points to that contrasted treatment which may be relatively

adopted for the same disease, occurring in these opposite constitutions.'

It may be thought that my descriptions of disease, and rules of treatment, are superficial; but I will beg to repeat that my remarks are chiefly directed to *mild* forms, or first stages of disease, and to that extent of domestic treatment which I consider safe. It must be my own duty to enjoin, it is the duty of the mother to observe, the necessity of resorting to more experienced care, when improvement is not soon visible, or disorder or disease shall appear to be increasing, as in those cases obscure causes probably exist which the eye of experience only can detect.

It is on this contrast that I would arrange two classes of these cutaneous diseases, which usually (although there are exceptions) bear an intimate relation to the strength or weakness of constitution.

The first comprehends those diseases which are marked by more vivid colours; the surrounding inflammation more rosy; the child itself appearing lively, comparatively vigorous, and often in a state of general health.

The second includes those diseases which assume a more *livid* hue, and are characterised by debility.

I.

Red and White Gum—Milk and Tooth Rashes.

—An eruption of minute pink or pearly spots, sometimes coalescing and forming distinct red patches. —Mild laxatives ⁽ⁱⁱⁱ⁾; change of milk or diet, if deemed essential; in some cases, incision of the gums.

Milk Crust.—Commencing in small vesicles or pimples, often extending over the face like a mask, frequently closing the eyelids, and producing a secretion of matter between them, accompanied often by enlargement of the glands of the neck. —Laxatives ⁽ⁱⁱⁱ⁾; alteratives ^(v); frequent application of warm water, or bread poultice, or gruel.

Inflamed Boil.—A red, hard, painful tumour, often terminating in abscess, producing a collection of matter sometimes to a very great extent. —If it be treated early, leeches and bread poultice, and laxatives ^(v). —If matter is already formed, incision; linseed poultice; if painful, and the child's rest disturbed, red poppy syrup at night.

Nettle Rash.—A sprinkling of round, white, slightly elevated spots, or wheals, surrounded by a pink margin of varying shades; preceded by languor and head-ache. —Laxatives ⁽ⁱⁱⁱ⁾; alteratives ^(v); fever mixture ^(x); regulated diet.

Herpes.—Small *vesicles* in *close* clusters, which distinguish them from pock; preceded by headache and slight fever.—In slight cases, laxatives ^(III); tepid ablution. If severe, laxatives ^(III); fever mixture ^(X); warm bath; defence from friction or exposure; if it produce wakefulness or pain, red poppy syrup at night.

Rose.—A pink rash appearing either in diffused patches somewhat resembling measles, or in round, slightly elevated lumps of light crimson; preceded by very slight feverish symptoms; not accompanied by redness of the eyes or running at the nose.—Mild laxatives ^(I), ^(V); attention to diet.

Psoriasis.—Small scaly patches or fissures usually on a light pink ground.—Laxatives ^(III); alteratives ^(I); tepid fomentations. If much debility, tonics ^(XI); if much irritation, disturbing sleep, an anodyne at night ^(IV).

II.

Ecthyma.—Small white or yellow bladders, terminating in a round irregular ulcer, with a dark, dull red or livid base; without fever.—Laxatives ^(III) every third day; tonics ^(VI); light, but nutritious diet; lotion ^(XIV).

Apthæ: Thrush.—Minute white vesicles studing the mouth and throat, surrounded by a faint

dull crimson or purple colour; swelling of the tongue and lips, attended by simple fever.—A gentle emetic of ipecacuan wine, x to xxx drops; alteratives ^(v); mixture ^(x); if much debility, tonics ^(xi).

Canker of the Mouth.—Softness, ulceration, bleeding and livid hue of the gums and lining of the mouth and lips, with fœtor of the breath; often spreading; sometimes terminating in sloughing or separation in flakes or shreds.—Mild laxatives ^(v); tonics ^(xi); the parts lightly pencilled with balsam of Peru.

The following diseases, although sometimes but slight, often produce such dangerous consequences, that I would not subject them to domestic treatment:—

Pemphigus.—Large oval bladders producing ragged ulcers; accompanied by fever of a low character.

Purpura: Purples.—Numerous red points or purple spots *not elevated*; sometimes bleeding on pressure.

Erysipelas: St. Anthony's Fire.—An inflammation of a shining red or crimson colour; extensive; often studded with vesications or blisters, terminating, if mild or successfully treated, in a

scaling of the external skin, or, if unchecked, in deep and dangerous mortification.

I offer these brief descriptions that they may be recognized, and excite immediate attention.

Of the diseases consequent to *specific infection* the most important are measles and scarlatina*.

MEASLES.

The primary symptoms, commencing from ten to fourteen days after exposure, are redness and tumefaction, and water of the eyes; languor; sneezing; head-ache; intolerance of light; dry cough; fever: on the fourth or fifth day the skin is covered with small, slightly raised, red spots, coalescing and forming red patches, of a

* These diseases occur once, and but once, during the life of the individual. Many, however, have died at an advanced age, without the slightest appearance of these eruptions. On the contrary, mild forms of each (scarlet rash, and measles without *catarrh* or fever) may occur more than once, and will not even then protect the child against the influence of the severe forms. It is important, then, that the mother should distinguish these varieties. The *shades* of inflammation may vary in degree or brightness; but the *general* character being learned, it will be easy to distinguish between them and the more simple rashes, which are excited by teething, &c., which are mild, transient, and, indeed, often *salutary* to the system.

circular, *crescentic*, or *annular* form, with often a few purple spots; sometimes bleeding at the nose; on the seventh or eighth day the redness fades, the fever subsides, and the efflorescence terminates in scaly exfoliation of the skin.

The danger in measles will be in proportion as the fever is severe, or the more important parts, as the lungs, &c., may become affected during or subsequent to the disease.

In the milder forms a gentle emetic ⁽ⁱⁱ⁾, if there be accumulation of mucus in the throat, a mild laxative occasionally ⁽ⁱⁱⁱ⁾, acidulated barley-water and other simple fluids, cooling mixture ^(x), and a well-regulated temperature of [the room, of about 60°, are the only essential rules to be observed. Inflammatory symptoms, or severe relaxation of the bowels, require more scientific consideration.

On sudden recession of the eruption, the warm bath should be employed; and on the child being disturbed at night by slight cough and simple restlessness, one tea-spoonful, or more, according to the age, of red poppy syrup, may be given at bedtime, or ^(ix). This is as far as domestic remedies should extend. On recovery, external exercise should be only employed in dry weather, and the child protected from cold air by flannel.

SCARLATINA (SCARLET FEVER.)

Simple scarlatina, or scarlet rash, is a mild disease, characterised by an efflorescence of bright red spots or patches, sometimes interspersed with pimples or very minute bladders, the skin feeling slightly rough to the touch; the papillæ of the tongue are slightly prominent, and the throat slightly inflamed; the eyes and lips are sometimes tumefied. The fever is very mild; the head but little affected. In about a week the external skin *peels* off in thin branny flakes.

A temperature of about 60°, mild laxatives (v) and diluent liquids are the only treatment usually required.

Occasionally, however, in children of an *inflammatory constitution*, these symptoms may be materially aggravated. In such a case, and especially in the still *more severe* form, where there is acute headache, delirium, flushed eyes, laborious respiration, the throat acutely inflamed, covered with grey or putrid sloughs, the tongue studded with bright red points, with high fever, or that of a typhoid or low character, I deem it most judicious not to offer here any brief mode of treatment. The symptoms are severe, and often suddenly changing their character. The duty of the nurse will be to obey implicitly the

advice of the medical attendant, always remembering that the diet should consist of diluent fluids chiefly, as barley-water, arrow-root, and the like. In the early stages, the remedies will be employed to reduce fever and inflammation. But few disorders are so peculiarly followed by debility, indicated by lassitude, wasting, and swelling of the limbs, as this : therefore, in the latter stages, it is essential to restore the debilitated system by tonics ^(XI) and nutritious diet, and to cleanse and heal the ulcerated throat by gargles ^(XVII). The diet should then consist of animal jellies, &c. The common drink should be orange-peel water, sweetened with barley-sugar, or weak port wine and water.

ON THE VARIETIES OF POCK.

CHICKEN-POCK, :

Bastard-pock, Glass-pock, Swine-pock, Hives, &c.

(Fig. 4.)

A SPECIFIC and slightly contagious disease, occurring but once in life ; marked by vesicles or bladders of varying sizes, shapes, and colours ; their eruption preceded for three or four days by slight fever.

The vesicles of the mildest chicken-pock are scattered, having a very faint pink hue around them. In the severer forms, the vesicles are of a larger size, the fever being more acute: successive crops of vesicles sometimes appearing and becoming even confluent, each crop being preceded by a distinct accession of fever. In these forms there is usually inflammation of the throat, and a severity of degree approaching the character of small-pox. The eruption usually appears first on the breast. On the second day, the pimple is speedily changed into a vesicle, and about the fourth day they sometimes turn yellow, becoming flaccid about the edges. On the fifth or sixth day brownish crusts are formed. On the dropping of the crusts, small mahogany-coloured spots are seen, which, however, are not permanent. The milder vesicles are not followed by permanent pits; but the severe disease is sometimes succeeded by marks as deep and distinct as those of small-pox.

In the milder forms, a laxative and light diet will ensure a favourable termination. In the severer, the different stages require discrimination in the treatment. Bleeding is sometimes requisite at the height of the disease; laxatives ⁽ⁱⁱⁱ⁾, sudorifics ^(x), tepid fluids, and moderate warmth throughout the course of the disease.

SMALL-POX

(Fig. 2.)

Commences with languor, drowsiness, pain in the head and loins, and in the belly on pressure, vomiting, and sometimes discharges of bile from the bowels. During this *primary* fever, epileptic fits will occasionally occur, and there is sometimes an extensive eruption of rose rash on the skin, which may be distinguished from measles by being more diffused, and not occurring in *circles* or spots. These symptoms, with flushing of the eyes, and sneezing, continue to increase until the third or morning of the fourth day, when small pimples appear on the face first, and subsequently on the breast. Then the first fever begins to subside. The pimple now becomes a vesicle with a pink margin, and slightly depressed in the centre. On the eighth day, the face swells ; there is inflammation of the throat, and a flow of saliva, the urine often becoming bloody. On the tenth day, the disease is at the height. On the eleventh or twelfth, the salivation ceases, the face subsides, and swelling occurs in the hands and feet. A dark-brown crust forms on most of the vesicles ; then commences the excitement termed the *secondary* fever. On the fifteenth or sixteenth day the crusts fall off, permanent marks depending on the depth or severity of the pustules.

This is a correct description of the *distinct*

small-pox. An enumeration of the varieties of forms and species I will not offer here, as it would be most unwise for any domestic treatment to be adopted on such a classification which can only confuse and mislead the nurse. Small-pox is sometimes communicated from the lips of an infected child to the nipple of its nurse, and I believe it may be imparted to the infant from an infected mother even before its birth. Small-pox may occur a second time in the same body: this, however, is a rare occurrence. The second attack is often as severe as the first. Cow-pock, although not an absolute preventive, usually produces a perfect modification of small-pox, when it happens to occur subsequent to vaccination. The premonitory symptoms are, it is true, the same in kind, though much less in degree. The progress is shorter. On the third day, the pimple becomes a vesicle, on the 5th, we often see light brownish scales; and on the sixth day, the pustule flattens and fades.

The unfavourable signs in small-pox are, the fever *continuing* high after the eruption is complete, especially if attended by delirium; the pustules ceasing to fill, or suddenly *paling* and *flattening*; the appearance of livid or crimson spots on the skin; bleeding from the bowels, gums, &c., and great prostration of strength. In children of a moderate constitution, the disease will

usually be the milder ; but in the serofulous child, extreme debility and prostration will often occur, and in the sanguineous the fever will run high, and be attended with a comparative increase of danger.

I have here described the small-pox occurring in the natural way. The *inoculated* form is, at the present day, so rare, (and, if all were to be guided by judgment, and indeed by duty, it would be still more so,) that it scarcely merits description. It is, it must be confessed, usually a milder disease than the natural form ; the premonitory symptoms are mild or even not apparent, and the fever is usually less severe ; but the discovery of cow-pock has offered us a blessing which, as it is so decidedly influential in protecting us from the disfigurement, the danger, and fatality of small-pox, it is worse than folly to disregard.

On the treatment of small-pox I would offer very brief comments. It is only in the mildest forms, where no important organ, as the brain, lungs, &c. are affected, that domestic management should be depended on.

The greatest improvement in the treatment of this, as of all eruptive fevers, is the cooling or refrigerant plan. The temperature should scarcely exceed 60°, and the bed or cot should not be loaded with curtains. In the early stages, the child should be fed with arrow-root or mashed

turnip, or any such simple diet, and drink lemonated barley-water; and it will be well to administer early a gentle emetic ^(II), which will render milder the first fever. Thus far only should domestic management extend: the constitution of the child, the progressive stages, the crisis and the decline, require a constantly varying mode. On the decline of the specific disease, however, if fever does not continue, and no inflammation exists, the management again devolves on the nurse. In this she must be extremely cautious. The child is in a state of excessive irritability, and every part is weakened. Exposure to cold air will frequently produce inflammation and fever, the system not being enabled to resist its influence. Excess in diet will often induce a disordered state of the stomach and bowels, which shall terminate in extreme wasting, often in death. It is a destructive error to believe that an excess of diet tends to nutrition: instead of this, such cramming does, indeed, *feed* the debility, and more and more oppresses the system, weighing down, irrecoverably, the already sinking power of life, which a little judgment would, perhaps, speedily raise and resuscitate.

The child should take an occasional laxative ^(III), or tonics ^(VI); its diet should be nutritious, as grated chicken, isinglass jelly, &c., which the judicious nurse may very properly select.

Small-pox is highly contagious, and the effluvia which emanate from an infected child will impart to the atmosphere of the room a power of propagating the disease to others, through the medium of the lungs; especially to those who are suddenly exposed to its influence, after having breathed for some time a pure air. The sprinkling of a solution of the chloride of lime will, in some degree, diminish this influence; it will always lessen, usually dissipate, the unpleasant odour arising from the small-pox patient. It is right, then, to observe every precaution. Linen and drapery, and furniture, should be removed and fumigated or washed; the apartment perfectly ventilated, and nitrous fumigation should be employed, by sprinkling sulphuric acid on common nitre, or by the solution of the chloride of lime.

VACCINIA—COW-POCK.

(Fig. 1.)

Pap-pock, Kine-pock, Vaccine Disease.

A *circular vesicle* of a pale bluish-white colour, gradually enlarging and spreading, surrounded by a pink or rose-coloured circle.

In about forty or fifty hours after the insertion of the cow-pock matter, successfully, a small red spot appears on the site of the puncture. About the fifth day a small pearly bladder is perceptible,

On the seventh or eighth day a slight depression is visible on it; it becomes rounder, and a pink ring is apparent. About the tenth day, the rosy blush has reached its height: there is often hardness in the armpit, and fever of various degrees. About the twelfth day, a crust is formed, which becomes dark brown, or of a chocolate colour, leaving, on its falling off, a whitish mark on the skin, nearly of a circular form, indented and radiated.

This is the progress of genuine cow-pock, but the philanthropist has undoubtedly cause to deplore its occasional failure in fulfilling *all* the promises which its enlightened promulgator and his immediate followers held out—that of its being a *complete* preservation against the contagion of small-pox. This assertion was certainly too positive, as it raised the hope of *absolute* security, which was blighted by occasional instances of small-pox after vaccination. It is true, indeed, that death itself ensued from a dependence on the process of vaccination, but these cases are infinitely fewer than those where death has been the consequence of inoculated small-pox, even under the most favourable condition, and the most judicious treatment. It is surely, then, giving the patient a chance of escaping that disease, which, if it do then occur, is, to an excessive degree, *milder* in its form than the small-pox communicated by inoculation *without* previous vaccination; and, in fact,

marked by little, if any, more severity than small-pox communicated by inoculation *subsequent* to vaccination.

But small-pox itself does sometimes occur a second time, and I am informed of the case of a mother who had secondary small-pox communicated from an infant who died, while two children who had been vaccinated were *constantly in the same room and escaped*.

It must be blindness to depreciate the inestimable blessing of such a discovery because it is not *infallible*. But such are the errors of our intellect—that which is not universally perfect is judged by us as good for nothing. The higher, too, that our hopes are raised, the deeper will be our disappointment; and I believe that, had the real estimate of vaccination been thus formed—that, in the great majority of instances, it secured the child from small-pox, and in those where it did occur, that the disease was usually rendered peculiarly mild—we should ere now have hailed the complete extermination of small-pox from the isles of Britain.

But I confidently express my belief, that a *perfect* inoculation of cow-pock is most rarely indeed followed by small-pox. It is the result of dependence on a *spurious* and false vesicle (*fig. 2*), which, by its irregular form and surrounding inflammation, may be easily distinguished from the regular

circular vesicle of genuine cow-pock ; and which is produced by the insertion of unhealthy matter, by the ignorance of the inoculator, or a neglect of watching the disease throughout its progress, or by a premature disturbance of the vesicle itself, by which the *distinct stages* of such progress are obstructed.

I believe, if *one perfect* pock is produced, and runs its course complete, the child is as much secured as if the whole limb was covered by the inoculation.

The health of a vaccinated child, too, is of the greatest consequence. If it be disordered, the child is not properly susceptible of the infection of cow-pock. Vaccination will resemble the seed sown on a barren or a weedy soil ; it will either not germinate, or its growth will be choked. It is, therefore, essential that the child should not be afflicted with internal disorder, and that it should also be free from cutaneous disease which might alter the very character of the cow-pock. I think that the administration of mild laxatives for three or four days previous to inoculation increases the susceptibility of the child.

The fever attending cow-pock is usually very slight ; occasionally, however, it is more severe, and will require the aid of laxatives and low diet for its remedy. From various causes, too, a rose-coloured inflammation will sometimes be excited

about the ninth day around the vesicle, which may spread so extensively as to cause a dangerous and even fatal consequence. If treated *early*, a cooling lotion ^(xii) and laxatives ⁽ⁱⁱⁱ⁾ will check its progress. If it continues to increase, and the child is extremely restless, the inflammation may be fomented with warm port wine, and aromatic and mild soothing medicines ^(vii) may be administered.

This inflammation is, I believe, usually the result of some inflammatory disposition of the child, or of an injudicious mode of inoculation, to which cause also would I refer the occurrence of cutaneous disease subsequent to cow-pock. I entreat that such evils may not tend to invalidate the virtues of *scientific* inoculation.

It has been thought that the susceptibility to the infection of small-pox *recurs* after certain periods, the influence of cow-pock having been, as it were, *worn out*. Although this is not decidedly proved, it may be well to employ vaccination (so simple a process) every fifth or seventh year, especially if small-pox be prevalent.

Then with regard to age, I should not recommend the vaccination of an infant before the third month is past; yet if small-pox be extensively spreading, or should suddenly appear in a family or district, I would scarcely place a restriction—the child should be secured by vaccination at *any* period of its life.

Small-pox and cow-pock obey a *mutual* influence. Thus, after the infection of natural small-pox has been received, it is possible to produce, by vaccination, a *modified* disease which shall be mild or severe, according as the one or the other shall predominate. Therefore, if the premonitory symptoms of small-pox should appear in a child where strong suspicion of infection should be entertained, vaccination should be directly performed. Even if the incipient pimple, or rash of the pock, should be apparent, I would recommend instant vaccination, as my experiments have proved to me its possible efficacy, even then, in rendering small-pox much milder, and I believe that, if the small-pox be languid and the cow-pock matter very active, the small-pox poison may be destroyed, and the cow-pock be established in the constitution.

Having thus endeavoured to inculcate the universal practice of vaccination, I believe I have offered all the remarks which are essential *for the mother* regarding this important subject.

The varieties of pock sometimes so closely resemble each other, especially in the early stages, as to render it difficult at first for even a scientific observer to decide. I have, therefore, placed in columns the circumstances in which they differ from each other. This arrangement, combined with a reference to the drawing, will, I hope, tend

to make the mind of the mother satisfied that her child has been rendered comparatively safe, and that, in other cases, the infant may not be exposed to danger of infection under a *false* notion of its security.

NATURAL SMALL-POX.

The premonitory fever is preceded by shivering, and lasts three, four, and sometimes five days.

There is often a *diffused* redness of the skin before the appearance of pimples and spots.

The eruption does not appear before the third day of the fever; indeed, it is oftener on the fifth. The pimples feel *hard* or round to the finger, and usually appear first about the face.

About the third day the pimple becomes a transparent vesicle, of a pointed or *conical* shape, which becomes rounder, and is then surrounded by a hard circular base.

The contents of the pustule after a time become *yellowish* and glutinous, exhaling an unpleasant smell.

CHICKEN-POCK.

Shivering seldom occurs, and the fever usually subsides on the second day.

This premonitory blush is never seen.

The eruption appears on the first, or beginning of the second day of the fever, usually commencing on the breast; the pimples are more minute, and in clusters; are less round, and feel *soft* and yielding to pressure.

A transparent vesicle almost from the first, of a *round* or oval form, having no hard circular base.

Throughout its progress the vesicle is filled with a *transparent* or milky fluid, without odour.

NATURAL SMALL-POX.

The pustules usually remain entire for *seven* days.

All the pustules usually appear *simultaneously*.

The formation of the crust does not commence until the *eighth* day.

The swelling of the limbs and body occurs usually before the crust is formed.

The pustule does not complete its course in less than from *fourteen* to twenty days.

A dusky violet colour of the skin exists for a short period, the permanent scars being irregular.

The small-pox which I have here alluded to, is that of the genuine and perfect kind. When it is modified by previous vaccination, it more closely resembles chicken-pock.

INOCULATED SMALL-POX.

On the sixth day, the pustule is irregular, yellowish, and opaque.

The pustule is at first flat, or circular on the top,

CHICKEN-POCK.

The films of the vesicles often give way in *two* or three days, and a brownish crust is formed.

There are *successive* crops of vesicles.

It commences on the *third* or fourth day; rarely on the fifth.

There is little or no swelling.

On the *fifth* day frequently; seldom so late as the eighth.

The scars are regular.

COW-POCK.

The vesicle is rounded and circumscribed, and of a pearly hue.

On the contrary, the vesicle is first indented, and

INOCULATED SMALL-POX.

and then, about the sixth or eighth day, becomes indented.

The circle of inflammation does not begin to appear until the sixth or seventh day.

There is an unpleasant odour.

The permanent mark is irregular.

COW-POCK.

then becomes flat or convex.

A faint ring of inflammation is seen from the first formation of the vesicle or bladder.

It is a more circular and whitish mark, with minute *puncta* or pits on its surface.

These, until the third day, can scarcely be distinguished from each other.

PORRIGO—SCALD HEAD.

Large, flat, light yellow pustules, pouring forth a glutinous fluid; concreting, and forming yellow, olive, or brown crusts; accompanied often by swelling of the glands.

For this we should employ an alterative at night ⁽¹⁾, a mild laxative ^(v), each morning; in the inflammatory stage, bread poultice; when this is abated, the ointment ^(xviii), which should be applied every morning and evening, the last application being first gently removed by sponge and warm water. Leeches are occasionally required.

RINGWORM.

Small pustules, or slight scaly crusts, scarcely moist, spreading in a circular form, resembling either circles of mosaic work, or rings of brownish red.

If the child is robust, or the disease appears very red, laxatives ^(III) every morning for four days, then the ointment ^(XVIII), or the lotion ^(XIV).

SCABIES—ITCH.

Varying in its forms: 1st, *very minute* pimples or bladders, sprinkled with blackish dirty spots, and interspersed with red lines, which are the result of friction; 2d, transparent vesicles, bursting, and forming a brown crust; 3rd, large circular lemon-coloured pustules, surrounded by a vivid inflammatory base, coalescing often into an irregular dark-brown crust. This eruption is distinguished from others by that *intense* degree of itching which is not experienced in any other disease of the skin in *childhood*.

In the first form, white precipitate ointment and lard equal parts, for six or eight evenings; in the 2d and 3rd, milk of sulphur formed into an ointment with lard, or dissolved in warm water, one or two teaspoonfuls of the sulphur being given every night in treacle or in milk. The remedies

for scabies, however, are various, depending chiefly on the whimsical preference of their advocates.

BURNS AND SCALDS

may be divided into three classes, according with the degree of the injury.

1. Superficial; simple redness, or with a slight bladder.—Cold water, or equal parts of spirits of wine and water, constantly applied; or lotion ^(xii).

2. Ulcerated; the blistered skin torn away, exposing a raw surface; secreting matter.—A lotion of lime-water and olive oil, equal parts; or finely-carded wool applied closely to the part for four or six days; then the cerate ^(xviii).

3. Gangrenous; an *eschar*, or dark crust formed; the parts deeply burned, and their *vitality* destroyed.—Warm poultice of linseed with oil of turpentine every four hours. If the child becomes cold after the burn, six or twelve drops of sal-volatile, with two or five drops of laudanum in warm water. If fever should be high, the mixture ^(x); if delirium, laxatives ⁽ⁱⁱⁱ⁾, and leeches behind the ear; if much debility, tonics ^(xi); if disturbed sleep, or convulsion, the mixture ^(vii).

CHAP,

or small bleeding fissures in the skin, during cold weather, may be obviated and relieved by

wash-leather gloves, and the friction of cold cream; or honey mixed with rose-water.

Chafing is usually the consequence of neglect or carelessness, and occurs generally in the folds of the skin, or where acrid discharges are allowed to remain. The only applications requisite are ^(xii), or elder-flower water often applied on a soft rag; the prevention of adhesion between the opposing raw surfaces; the bowels being regulated by manna or calcined magnesia.

JAUNDICE.

Simple yellowness of the skin does not constitute jaundice: slight disorder of the bowels will often produce it, which will yield to a few doses of calcined magnesia. When, however, the white portion of a child's eye becomes tinged,—the evacuation of water staining the linen,—disease may be anticipated. If the contents of the bowels are of a *white or clay colour*, the child appearing restless or extremely languid, disease has commenced.

In the first case, one or two tea spoonsful of castor-oil, with a mercurial powder ⁽ⁱ⁾, repeated twice or thrice, will usually prove successful. In the second, the powder ⁽ⁱ⁾ at night, the powder ^(v) in the morning, which may be decreased

or discontinued as the green or bilious tinge in the evacuation from the bowels is produced. In addition to these remedies, the warm bath, or, at least, warm fomentation to the belly, should be employed.

The more severe forms of jaundice will be marked by more formidable symptoms.

COLIC

Is invariably to be referred to the deleterious influence of the child's food, and is marked usually by constipation. Unhealthy secretions are formed in the bowels, evinced by slimy evacuations; and there is a constant formation of *wind*, producing distension, and often acute pain. In simple colic, which is of the nature of spasm, gentle friction will *relieve*. In inflammation of the bowels, pressure of the slightest kind will always *increase* pain. Colic usually occurs within an hour after the child is fed, or sometimes comes on at stated periods in the day. During the fit the child will writhe as if suffering acute pain, which is sometimes relieved for a time by the evacuation of wind. To relieve the fit of colic, one or two tea spoonsful of castor-oil should be given—afterwards, an anti-spasmodic^(VI); the belly being gently rubbed, or the child immersed in the warm bath.

But it is most important to change the diet of

the child, to which I have previously alluded; and if it be a suckling, the health of the nurse, the quantity and quality of her milk must be judiciously attended to.

INFLAMMATION OF THE BOWELS OR BELLY.

I think it right merely to draw the nurse's attention to its mildest form—marked by heat of skin, thirst, languor, restlessness, fretfulness, slight *tenderness* of the belly on *pressure*, and usually constipation: the child should be immersed in the warm bath (of a temperature of 95°); castor-oil should be given; leeches, according to age, two, four, or six, applied to the belly; the bleeding favoured by an oatmeal or bread poultice; and warm fluids, barley-water, arrow-root in water, apple-tea, &c., should be plentifully given. If this plan succeeds, *in removing pain*, and rendering the child cooler and more quiescent, the mild fluids will be usually the *only* medicines essential to the child's recovery.

DIARRHŒA AND CHOLERA.

Relaxation of the bowels is a constant attendant on infancy. It is not essential that I should enter into a prolix description of the different species,

which are marked by much variety of colour and consistence in the evacuation. These varieties result from very different causes, in explanation of which I should refer to terms and subjects unintelligible in the nursery.

When the evacuation consists chiefly of

Glairy or Flaky Fluids,

it may be referred usually to sudden or extreme alteration of temperature, producing irritation in the bowels, in consequence of their intimate sympathy with the skin, and is often a sign of inflammation of the *inner* part of the bowels.

Treatment.—One or two tea spoonsful of castor-oil; one, two, or three tea spoonsful of chalk mixture ^(viii); the powder ⁽ⁱ⁾ being given every morning; rice gruel, with cinnamon; warm fomentation, or the warm bath; and if pain is felt or complained of, leeches should be applied to the belly. If the discharge consists of a

Milky Fluid,

it may be referred to want of bile, and is often the effect of weaning.

Treatment.—The powder ⁽ⁱ⁾ each night; the mixture ^(viii) every three, four, or five hours; injection of the bowels with starch-water, in which, in excessive discharges, from three to six drops

of laudanum may be poured. Dry warmth.
When the evacuations are

Feculent,

i. e. of a healthy appearance, but incessantly pouring forth—whether arising from checked perspiration, from fright, or from deleterious food.

Treatment.—The powder ⁽ⁱ⁾ each night; the powder ^(v) each morning; the mixture ^(viii) each third or fourth hour; rice gruel with cinnamon.

If the discharges are

Bilious

fluid of a yellow or green colour, we may usually impute the disorder to improper food, of an acid or stimulant quality, such as fresh or green fruit, or to intensely hot weather, by which the liver is highly excited to form inordinate quantities of bile.

Treatment.—The mixture ^(viii) every four, five, or six hours; for three successive nights one or two grains of calomel; repeated small doses of calcined magnesia (from three to five grains) every third, fourth, or fifth hour, in rice gruel or whey, which should compose the common drink.

If the discharge consists of

Indigested Food;

strict regulation of diet, which should be very moderate; castor-oil once; five or ten drops of

'muriated tincture of iron' in rice gruel every third hour; one to four drops of laudanum in rice-gruel for one, two, or three nights; strong camphor liniment, rubbed twice in a day on the breast bone.

The neglect of this relaxation will often terminate in infantile cholera, a disorder of excessive severity and danger. In other cases the relaxation will become protracted, reducing the child gradually to a condition of extreme emaciation. In this latter case, the powder^(vi) may be persevered in.

DYSENTERY, OR BLOODY FLUX.

Frequent evacuations of bloody *mucus*, attended with pain and straining—a disease which requires scientific care, as it is an indication of severe disorder of the inner membrane of the bowels, near their termination. When these appearances *chance* to be very slight, a warm bath, strained rice-gruel, the powder⁽ⁱ⁾ night and morning, and the mixture^(viii) will usually prove successful.

The reverse of relaxation is

CONSTIPATION,

which, although not always itself a disease, is the cause of many. Its existence predisposes the child to be influenced by otherwise harmless cir-

cumstances; and, by its mere *pressure*, it produces obstruction to the circulation of the blood, and also to the full absorption of nourishment from the food. Exercise and regulation of diet will almost always prevent constipation in children; and it is as easily removed by small doses of castor-oil, or even by occasionally eating stewed prunes or figs, or tamarinds. In very stubborn cases, however, it would be injudicious to repeat the laxative very often: an injection of warm water or thin gruel, with a dessert spoonful of castor-oil, is more safe and efficacious: it is a process in which every experienced nurse ought to be an adept.

CROUP.

The confirmed stage of croup can scarcely be mistaken: its danger and its difficulty of course forbid its being referred to domestic management. I am, however, anxious to offer some brief precautionary remarks, which may perhaps tend to arrest the progress of this most distressing affection, by the inculcation of timely attention.

Croup is most prevalent about the second or third year—attacking usually children of florid complexion and those loaded with fat: its excitement is most commonly cold; moist air especially influencing those children who are highly fed. In some few cases its attack is most sudden;

but usually it is preceded by a peculiar hoarseness or dryness of the throat, attended occasionally with cough, without any complaint of pain, or any marked indisposition. This hoarseness is distinct from common sore throat; it is marked by a peculiar clear *tinkling*, or metallic vibratory sound, and is scarcely, if at all, discoverable in the speech or talking, but only during or immediately after coughing. By these marks, we can discriminate between the premonitory huskiness of croup, and the common hoarseness of a cold. When the voice is changed in speaking,—especially if it be marked by the distinct ringing or metallic sound,—immediate and active remedies should be adopted; a moment should not be lost; the danger is extreme—inflammation is present, and the formation of that peculiar membrane will probably soon commence, which may continue to increase until it fills the cavity of the windpipe, producing suffocation.

It is only essential, then, that I should direct the attention of the nurse to the premonitory hoarseness, or, as we often term it, *croupy* cough. Her anxious attention and careful treatment may often prove the salvation of a life; and even, in common hoarseness, may also avert its very frequent consequence—inflammation of the lungs.

would recommend the application of a plaster of mustard and warm vinegar to the upper part of

the *stomach bone*, for five, ten, or fifteen minutes, until the child appears to feel pain, or redness is produced ; or the throat may be rubbed with oil of turpentine, and then wrapped in flannel. Castor-oil should be given once, in so full a dose as to prove purgative, and ten or twenty drops of antimonial or ipecacuan wine administered in linseed-tea, every hour, or every two hours. The child should be kept *warm*, and every plan adopted to induce perspiration. This effected, the child will usually be restored to a state of comparative safety, and the nurse's alarm may cease.

INFLAMMATION OF THE LUNGS.

Although less sudden, and also less dangerous, inflammation of the lungs or of their membranes is a common consequence of exposure to cold. The same mode of treatment which I have above recommended should be here adopted, especially when we hear quick breathing, wheezing, and cough, accompanied by languor. In addition to these remedies, the child should be immersed in the warm bath for five or ten minutes : if there be excessive heat of skin and thirst, leeches, according to the age, should be applied to the stomach bone. This plan, energetically adopted, will often check the disorder in its course ; but again, I would repeat, let not the nurse depend on her own judgment, if the symptoms continue to increase.

WHOOPING COUGH.

The quick short expirations,—the deep convulsive inspirations,—the sense of suffocation,—the expectoration of glairy *mucus*,—the livid hue of the face,—the frequent gushes of blood from the nose, &c.,—the extreme, though transitory, agitation of the child, in confirmed whooping cough, are too decidedly marked to be mistaken. The first symptoms are usually those of common cold; but as this is a *specific* disease, arising from an epidemic atmosphere or actual contagion, it cannot then be completely checked, although the symptoms of its *essential* stages may be mitigated. The glairy mucus of the throat is the result of inflammation. On the active diminution of this state in the first stage, in a great degree depends the mildness of the second, and the distressing, and often destructive ultimate consequences of the disorder, to the lungs, brain, and other vital organs.

Bleeding, laxatives ^(m), mild emetics ^(m), are essential in the early stage of whooping cough. If the child is sucking, no change of food should on any account be adopted; if it be weaned, the diet should now consist merely of barley-water, slightly acidulated with lemon-juice or arrow-root, &c., and linseed-tea, sweetened with barley-sugar,

or gum-arabic water sweetened. The temperature of the room should be dry and moderate.

On the abatement of the inflammation and acute fever, in about a week or two, the mixture ^(ix) may be administered.

In mild, warm, dry weather, the child may take external exercise, between twelve and two or three o'clock; it must be well defended from cold air. If the cough at this time be extremely troublesome, disturbing the sleep of the child, the night dose of the mixture may be slightly increased; and it is at this period that we shall derive much benefit from embrocations applied along the spine, especially between the lower angles of the blade bones. The oil of amber is my favourite liniment: this should be rubbed into the canal on each side of the ridge of the spine. On the continuance of extreme debility, tonic or strengthening remedies may be employed ^(vi) ^(xi): the diet should be nutritious—consisting of animal jellies, asses milk, &c.; and pure country air should be, if possible, inhaled.

MUMPS.

A painful enlargement of the glands before the ear and about the lower jaw, usually dispersing about the fourth or fifth day,—sometimes attended with fever—occurring but once during life, and

is epidemic, if not contagious. Laxatives and low diet, rest and warmth, are advisable. If much heat and extreme swelling, however, should supervene, care must be taken to reduce it by bleeding, &c., as the disease is sometimes prone to leave these glands, and fix on those of a more important nature, entailing permanent and distressing consequences.

QUINSEY

is an inflammation of the *tonsil* glands at the back of the mouth, commencing with hoarseness, pain, and difficulty of swallowing. In this stage, a mild laxative ^(v), the gargle ^(xvii); the external friction of turpentine with flannel; dry warmth and diluent drinks—will often check the disease. When acute pain and fever, with extreme difficulty of swallowing occur, a more active mode must be adopted.

ABSCESS WITHIN THE EAR.

When we consider that this is but the consequence of previous inflammation, and witness the extreme prevalence and frequent danger of this discharge, we must regret the neglect of early attention and treatment, which might so often prevent it. This running of the internal ear is always distressing, often very offensive, producing in some cases

permanent deafness, and, by its extension to the brain, may destroy the child. I do not write this merely to excite alarm, but to direct the mother's notice to that which we so commonly disregard as a trifling complaint—*ear-ache*. In the infant, it is true, it is often difficult to discriminate the seat of pain; but if, when the child is restless, and screams violently and suddenly, attentive examination be made of every part by pressure of the finger, we may usually decide: if, with restlessness and screaming, the child tosses its head to and fro, and seems anxious to lie on one side, we cannot err in applying one, two, or three leeches behind the ear on the opposite side, according to the age of the child. This will invariably relieve; it will often restore. If pain continues, a small blister should be applied beneath the ear for three, four, or six hours, and a mild laxative given. On the establishment of the discharge, the lotion (XIII) or (XIV) should be *carefully* injected by a small ivory syringe into the ear, of a cool or merely tepid temperature.

INFLAMMATION OF THE EYE, WITH EFFUSION OF
MATTER,

is a very frequent disease of infancy, commencing about the sixth or eighth day after birth; but as it is commonly confined to the lining

membrane of the *lids*, it is seldom dangerous, and not difficult to remove in the early stage. The discharge is, at this time, thin, and easily escapes as it is formed. If, however, it be neglected, the eyelids become tumefied, and appear internally like scarlet velvet: the matter is collected in great quantity within the lids, and the eye itself will then often partake of the disease.

Exposure to cold air may prove its cause; but it most commonly arises from the eye coming in contact with the white flux of debility from the mother during the birth.

Instantly on the eyes becoming glued together in the morning, or that matter appears, pure warm water should be constantly squeezed from a clean sponge upon the *eye*, to cleanse the lids from the matter. A mild laxative ^(II) should be given every morning. Two or four drops of the lotion ^(XIII) or ^(XIV) being dropped in twice or thrice in a day.

If the discharge and swelling should increase, one or two leeches should be applied about an inch from the external angle of each eye, and a small blister behind each ear for two or three hours. On the subsidence of the inflammation and discharge, or when the infant can open the lids in the least degree, the lotion may be more freely used; six drops of ^(XIV) being injected every five or six hours.

DIFFICULTY IN THE EVACUATION OF THE WATER

sometimes depends on very simple causes, as cold, teething, worms, &c. In such cases, a laxative and the warm bath will generally relieve it.

If there be much pain, and if no water is passed with violent effort, inflammation probably exists in the bladder or kidneys, or a stone is obstructing the passage.

INCONTINENCE OF THE WATER

may arise from indolence or habit: correction or self-exertion will suggest themselves as the remedy. If debility be the cause, tepid or cold sea bathing should be resorted to; the constitution being improved by tonics^(VI) and nutritious diet: castor-oil occasionally, and the frequent drinking of marsh-mallow tea, in which barley-sugar and gum-arabic have been dissolved.

LEUCORRHOEA (WHITE FLUX).

This discharge will, from the same cause, affect the *vagina* of the female child—producing sometimes acute inflammation, indicated by heat, redness, and swelling; and if inflammation is severe, the cries of the child in evacuating the water.


The treatment is as follows:—a laxative every

second morning ⁽ⁱⁱⁱ⁾; the mixture ^(xv); tepid water washing thrice in a day in the early or inflammatory stage, followed by the lotion ^(xiv). When that has subsided, if the disease does not yield to this treatment, two or three drops of tincture of cantharides, or four or five drops of the balsam of copaiba may be added to each dose of the mixture.

WORMS. T

These parasites are of several species—the presence of which within the human bowels is productive of many serious disorders of childhood. These, however, and the disorders which they excite by their irritation, or the absorption of *chyle* which should nourish the child, I shall not enumerate; but confine my remarks to that species which alone should be left to the management of the nurse—the small thread, or *maw-worm*.

I will abstain also from discussing the opinions so various, regarding their origin or mode of formation—merely remarking, that in infants they may most commonly be referred to improper diet, especially to the swallowing of crude or unripe fruits, or to the unhealthy secretions of the bowels themselves in weakly children. The chief objects, therefore, will be to dislodge the worms and the slimy matter in which they are imbedded, and to restore the health and tone of the bowels, regu-



lating, of course, most cautiously the diet. Castor oil, therefore, should be first given in a proper quantity; secondly, Indian pink tea, sweetened, should be given every night; the powder ⁽ⁱⁱⁱ⁾ every second morning. This system should be continued for about a week, when tonics ^(vi) ^(x) should be administered. This form must, of course, be varied according to circumstances.

PROLAPSE OF THE BOWEL

is often, though not invariably, the consequence of the irritation of worms. It is of importance to ascertain the exact cause in reference to the treatment. The only advice which I would offer to the nurse would therefore be, to keep the bowels gently relaxed by castor oil, or by the water of boiled prunes or figs or tamarinds. If the medical attendant be not present she should return the bowel by placing the child across the lap, its hips being more elevated than its head, by laying a fine linen rag on the bowel (previously oiled), and by continuing gentle pressure; or if this does not succeed, by introducing the fore or little finger oiled, within the bowel, and gently propelling it forward, when the bowel will usually gradually return. The part should then be sponged with a decoction of oak-bark, one pint; port wine, one ounce.

NAVEL RUPTURE—STARTING OF THE NAVAL,

Although sometimes the result of too firm a pressure of the swathe, or a forcible *dragging* of the navel-cord, may occur from *natural* relaxation. So rapid is the growth of the body at this age, that pressure regularly applied in a short time will soon effect the cure of this weakness, restoring the orifice of the navel to its proper size.

A circular piece of soft cork of a size sufficient to cover completely the navel, but rather *convex* on the side next the navel, should be pressed firmly on it, the protrusion being first *perfectly returned*, and a circular piece of any adhesive plaster laid immediately over it. Six or eight strips of the plaster should then be laid in the form of a star over and across the cork; and over it a common calico roller about three inches broad. In a few cases, a truss may be required. Cough and constipation will often impede the cure by constantly renewing the protrusion, but this plan will ultimately succeed. Castor oil, occasionally, will be serviceable, to obviate any straining of the child.

The protrusion, or rupture, which occurs in the *groin* is a more complicated circumstance, and requires scientific attention.

One of the most insidious diseases of childhood, in its early stages, is

INFLAMMATION AND ABSCESS OF THE HIP-JOINT;

a disease of the highest importance, as the neglect of it is so often followed by permanent lameness and distortion.

It would be folly to offer here any mode of treatment for so important a malady, but let me inculcate the earliest attention to it. Although inflammation already exists in the hip-joint, the first complaint which the child utters is usually referred to the knee. It either complains of pain at this part, or directs its hand frequently to it. Thus is the attention often diverted entirely from the real seat of disease. The disease is usually occurring in weakly or emaciated children, although not exclusively confined to them. If such children, then, either subsequently to a blow or a fall, or even without any accidental cause, complain of pain about the knee, with inability or indisposition to walk or move, be assured that some disordered action is going on, probably in the hip or knee joint; and no time should be lost in attempting its relief.

HYDROCELE.

This is a collection of a clear fluid in the *scrotum*, and may be distinguished from a more important

disease of the same part (inflammation of the *testis*) by its *gradual* formation, and its appearing perfectly *transparent* when held before a candle or strong light.

The inflammation I have alluded to requires peculiar treatment; but the collection of fluid will usually yield to the *continued* cold application of a solution of *muriate of ammonia* (sal ammoniac), two scruples, in spring water, four ounces, combined with the mercurial alterative ^o. I would recommend perseverance for a month. If this is not successful, and the fluid should increase, a slight and very safe surgical operation may be requisite.

ADHESION OF THE LABIA,

by a mere line, or a thin film along their edges, often occurs without being discovered by the nurse. When it is noticed it is liable to become the cause of needless alarm. It may easily be divided by a thin silver probe, and prevented from reuniting by spermaceti ointment on lint being placed between the *labia* for three or four days. This division should be effected in infancy for many obvious reasons.

CHILBLAIN :

is an inflammation excited to overcome a stagnation of blood from the application of cold. The

prevention, then, should consist in defence against cold.

Prevention.—Wash-leather gloves, or socks of oiled silk, may be worn. The parts exposed, or disposed to the disease, should be rubbed with camphor liniment every night. Sudden transitions, or standing in the damp, should be avoided, and regular exercise to promote free circulation of blood should be enjoined.

Treatment.—In the inflammatory stage, a liniment composed of equal parts of camphorated spirit, soap liniment, and tincture of cantharides.

In the second, where a bladder is formed, linseed poultices.

In the third, where it is ulcerated, (an open sore,) the *calamine* ointment, or the ointment (xviii) : a laxative (iii), should, in all cases, be given occasionally; and if the rest of the child be broken, one or two teaspoonsful of red poppy syrup at night.

WHITLOW,

in its simplest form, is a disease of the skin merely, although its attendant pain may produce a considerable degree of fever.

It may arise spontaneously, or from some irritating wound or substance imbedded under the nail. In the first case it may be an indication of internal disorder: poultices of linseed should then

be applied, and laxatives administered. If the child, however, be quite healthy, the bowels may be opened by a laxative ⁽ⁱⁱⁱ⁾, and the progress of the swelling checked by the constant use of cold lotion ^(xii). If, however, it shall burst, the skin should be carefully removed by scissors, and the ointment ^(xviii) applied until it heals. In the second case the removal of the irritating cause will usually cut short the disease.

In cases of severe pain a mild anodyne ^(iv) should be given at night.

STYE—ABSCCESS IN THE SMALL GLANDS OF THE EYELIDS.

If extensive, the most useful application will be a poultice of starch and bread boiled in water; and when the small abscess has burst, the application of the ointment ^(xviii), on a camel's-hair pencil, twice or thrice in a day.

The edge of the lids at the root of the lashes are sometimes studded with small *pustules*, which, if neglected, terminate in *blear eyes*. The gentle application of the ointment ^(xviii) in the commencement will prevent this unsightly red circle round the eyes, which might otherwise become permanent.

FALLING OFF OF THE HAIR

will sometimes occur from weakness of the *bulb*, leaving circular bald patches on the head. If

minute examination can discover no pimple or moisture on the part, the application of bear's-fat, or camphorated spirit of wine in which rosemary leaves have been steeped, will in time restore the growth of the hair. In very stubborn cases, the lotion ^(xiv).

EXCESSIVE BLEEDING FROM LEECH-BITES

may be usually stopped by the closing of the orifice and firm pressure by the finger. If this is not efficacious, one drop of strong nitric acid may be carefully applied on lint to the orifice, or the point of a stick of lunar caustic, or strong *acetic* acid. I have, however, known the application of a *ligature* essential for arresting the blood's flow.

BLISTERS

will, in some constitutions, and when continued for an *undue* time on the part, occasion a very deep and precarious ulceration, and in some instances will be followed by mortification. They should not be continued on the skin of a child more than six hours: three or four hours will usually suffice, on account of the irritability of skin in childhood. Their severity may be mitigated, and their influence on the bladder prevented, by interposing between them and the skin thin muslin or gauze.

On the occurrence of extensive ulceration and excessive discharge, a poultice of diluted goulard water and bread will be useful, or the lotion ^(xiv) sprinkled on the surface of a bread poultice. If the child's sleep is disturbed by the local irritation, the powder ^(iv) at night.

The more severe local effects of blisters require more scientific aid.

Blisters will sometimes produce *strangury*, or difficulty in the evacuation of water, especially if placed near the region of the bladder. In this case, the following mucilage should be freely given:—Pearl-barley water, half a pint; barley-sugar and gum-arabic each half an ounce.

BRUISES.

Slight bruises should be immediately washed with spirit of wine and rose-water. If there is much blood extravasated under the skin, indicated by a sudden black or purple swelling, two or three leeches may be applied, and the bleeding encouraged by linseed poultices.

SPRAIN.

The consequent swelling renders it often difficult to distinguish a sprain from a fracture or a dislocation. If the sprain, however, be distinctly ascertained, the part should be wrapped in a poul-


tice of warm vinegar and fine oatmeal, and this should be repeated every fourth hour. If pain is acute, an anodyne should be given at night. When the pain has ceased entirely, and swelling and weakness remain, the camphor liniment should be rubbed in by the fire thrice in a day; and when the limb begins to be exercised, a soap plaster should be strapped round the part.

It is important to know that the condition of the constitution exerts very great influence over *local* injuries. If the system be healthy or robust, an injury will be recovered from with comparative celerity—an effect which is explained by that beneficent law, the power of nature, in repairing the injuries of the body. If, however, the constitution be in fault, this power is diminished or destroyed. It will, therefore, be our duty to assist nature in her efforts by restoring the health of the body in severe injuries, and also where even slight effects are aggravated and protracted. Laxatives, alteratives, and tonics will often effect an immediate change in the progress of healing. To the first only—an attention to the state of the bowels—I would here direct the attention of the nurse, both to regulate the function of the bowels, which accident often deranges, and to obviate the frequent consequence of fever.

THE ADMINISTRATION OF MEDICINE.

In offering some prescriptions or remedies adapted to the *mild* forms of the diseases of children, it is well to refer to the very culpable irregularity and imperfection with which medicine is often administered. This may be ascribed to a defect in management or control, or to idleness on the part of the nurse. Wilful omissions, in regard to the periods directed for the repetition of medicine, are unhappily most frequently discovered, often, too, accompanied by the very gratifying inducement of *cheating the physician*. Even if the exact periods are attended to, the medicine is so carelessly administered, that half—perhaps more—of it is frequently lost,—the nurse believing that the *intention* of giving the whole is equally efficacious with its *accomplishment*, or being too indolent to repeat the effort. With regard to the application of leeches, also, even the sensible mother will be satisfied with their *mere application*, regardless of the quantity of blood drawn, which is often in so minute a quantity as to be altogether useless.

It is certainly painful to compel the child to swallow medicine, but the yielding to their resistance is a most false and destructive kindness. This difficulty may be, in many cases, much mo-



derated by rendering the medicines more agreeable to the child, and as minute in quantity as will be efficacious ; and when this is effected the nurse should be warned of the negative crime she is committing, in neglecting to do that properly which only can save the life of her nursing.

It is essential for us, also, to regard the *time* of giving medicine, relatively to the administration of food, especially with respect to laxatives. These should not be given within two hours of a meal, either preceding or subsequent to it. One of two evils will accompany this want of caution. Either the medicine will pass off *inertly* in the mass of food, or its action will hurry off *prematurely* the food before its juices have been absorbed for the nutrition of the body.

It is a duty to the medical adviser, it is a solemn duty towards the child, that the nurse should implicitly obey the orders given to her. Her failure in this sacred charge indicates a melancholy want of Christian charity.

It is a very great error for the nurse to threaten the child with the *penalty* of physic—to cause it to consider medicine, like the rod, a punishment for fault. It should rather be represented as a *friend* than a foe—as a blessing which will relieve it of pain—perhaps prevent its dying. Children will understand this reasoning more than it is usually

believed they can ; and under this management, combined with a little coaxing, may be generally induced to take their medicine regularly, and without that reluctant fretfulness which often produces as great a degree of evil as the medicine itself will bestow good.

FORMS OF REMEDIES.

POWDERS.

(To be given in Jelly or Loaf Sugar.)

(I.) *Mercurial Alterative.*

Quicksilver with Chalk (Calomel*)	. . . . .	18 grains.
Powdered Rhubarb	. . . . .	6 grains.
Divided into	. . 6 .. 4 .. 2 †	
Age, (from)	. . 1 .. 3 .. 5	

To be given each, or each second night.

(II.) *Nauseating.*

Calomel	. . . . .	4 grains.
Ipecacuanha Powder	. . . . .	10 grains.
Powdered Ginger	. . . . .	6 grains.
Divided into	. . 6 .. 3 .. 2	
Age, (from)	. . 1 .. 3 .. 5	

Morning and evening—to be more frequently repeated if vomiting is required; not, however, exceeding four doses.

* Those medicines, of which *Calomel* forms a part, having a tendency to produce soreness of the gums, should be administered with caution, and the mouth should be constantly examined. If soreness is evident, they should be discontinued, or salivation may be the consequence. *Calomel* usually renders the evacuations of a bright, or grass green. This change may consequently be usually referred to the medicine, and not to the effect of the disorder.

† The upper line of figures refers to the number of parcels into which the whole quantity of powder is to be divided; which proportion is adapted to the age expressed by the figures immediately below. Thus, in No. I., one sixth portion is appropriate for an infant of one year, and so forth.

(III.)

Purgative.

Calomel	2 grains.
Powdered Rhubarb	10 grains.
Powdered Jalap	3 grains.

Divided into . . . 4 .. 2 .. 1

Age, (from) . . . 1 .. 3 .. 6

Each, each second, or each third morning.

(IV.)

Mild Anodyne.

Dover's Powder (Opium)	10 grains.
Quicksilver with Chalk (Calomel)	16 grains.

Divided into . . . 6 .. 3 .. 2

Age, (from) . . . 1 .. 3 .. 6

Each night, or night and morning.

(V.)

Vegetable Alterative.

Dried Sub-carbonate of Soda	1 scruple.
Powdered Rhubarb	8 grains.

Divided into . . . 4 .. 3 .. 2

Age, (from) . . . 2 .. 4 .. 6

Every eighth, twelfth, or twenty-fourth hour.

(VI.)

Mineral Tonic.

Powdered Rhubarb	6 grains.
Sub-carbonate of Iron	1 scruple.

Divided into . . . 6 .. 3 .. 4

Age, (from) . . . 2 .. 4 .. 6

Every twelfth, or twenty-fourth hour.

MIXTURES.

(VII.) *Antispasmodic.*

(Convulsion—Spasm—Wind—Transient Bowel Pain.)

Calcined Magnesia	2 scruples.
Tincture of Castor	20 drops.
Compound Spirit of Æther	1 drachm.
Red Poppy Syrup	$\frac{1}{2}$ ounce.
Dill Water	2 ounces.

Dose, one tea spoonful—one dessert spoonful.

Age, (from) 1 3

Each third, fourth, fifth, or sixth hour.

(VIII.) *Astringent, Anodyne.*

(Flux of the Bowels.)

Prepared Chalk	3 drachms.
Tincture of Opium*	15 drops.
Loaf Sugar	1 drachm.
Cinnamon, or Spring Water	2 ounces.

Dose, one tea spoonful—one dessert spoonful.

Age, (from) 1 3

Each fourth, sixth, or eighth hour.

* Those medicines, of which opium forms a part, must be cautiously administered. If any degree of *stupor*, or excessive *drowsiness* be induced, it will be the safest plan to discontinue them, or to extend the intervals of the doses, or to diminish the dose itself.

(IX.)

Soothing.
(Cough, &c.)

Paregoric Elixir (Opium)	. . . . .	2 drachms.
Antimonial Wine	. . . . .	1 drachm.
Spanish Liquorice	. . . . .	1 drachm.
Gum Arabic	. . . . .	1 drachm.
Loaf Sugar	. . . . .	1 drachm.
Boiling Water	. . . . .	2 ounces.

Dose, one tea spoonful—one dessert spoonful.

Age, (from) 1 . . . 3

Each second, fourth, and sixth hour.

(X.)

Sudorific.
(Fever, &c.)

Ipecacuanha Wine	. . . . .	} Each 50 drops.
Sweet Spirit of Nitre	
Lemon Juice	. . . . .	1 tea spoonful.
Loaf Sugar	. . . . .	1 drachm.
Spring Water	. . . . .	2 ounces.

Dose, one tea spoonful—one dessert spoonful.

Age, (from) 1 . . . 3

Each third, fourth, or sixth hour:

(XI.)

Tonic.
(Debility.)

Dried Orange Peel	. . . . .	1 drachm.
Calombo Root	. . . . .	$\frac{1}{2}$ drachm.
Sugar	. . . . .	1 drachm.
Boiling Water	4 ounces.

When quite cold, strain, and add

Elixir of Vitriol	1 drachm.
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Dose, one dessert spoonful—one table spoonful.

Age, (from) 2 . . . 5

Twice, or thrice in a day.

LOTIONS.

(XII.) *Evaporating—Cooling.*

Goulard's Water	$\frac{1}{2}$ ounce.
Rose, or Spring Water	2 ounces.
Distilled Vinegar	1 ounce.

(XIII.) *Astringent.*

White Vitriol	3, 4, or 5 grains.
Rose, or Spring Water	1 ounce.

(XIV.) *Astringent.*

Lunar Caustic	2 or 4 grains.
Rose, or Spring Water	1 ounce.

This lotion will produce a permanent stain on linen, (iron
mould, or on the skin.

(XV.)

Almond Oil	3 drachms.
Tincture of Myrrh	1 drachm.

(XVI.)

Blue Vitriol	10 grains.
Powdered Gum Arabic	1 drachm.
Honey of Borax	3 drachms.

To be brushed *lightly* round the mouth with a large camel's
hair pencil.

(XVII.)

Stimulant Gargle.

Tincture of Capsicum	18 or 20 drops.
Or Brandy	1 drachm.
Alum	2 scruples.
Honey	$\frac{1}{2}$ ounce.
Spring Water	$2\frac{1}{2}$ ounces.

OINTMENTS.

(XVIII.)

<i>Citrine</i> Ointment	} Equal parts.
Lead Ointment	
Spermaceti Cerate	

(XIX.)

Tartarized Antimony	2 scruples.
Spermaceti Cerate, or Cold Cream	$\frac{1}{2}$ ounce.

The skin to be rubbed morning and evening until pimples
are formed—and then to be discontinued.

